

# AMERICAN BEE JOURNAL

MARCH

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**Recovering a Lost Swarm in Iowa**

# American Bee Journal



PUBLISHED MONTHLY BY

**American Bee Journal**

1st Nat'l Bank Bldg. Hamilton, Illinois

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Riddle, Oreg., July 4, 1912.

L. W. WELLS.



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J. W. HOUTZ.



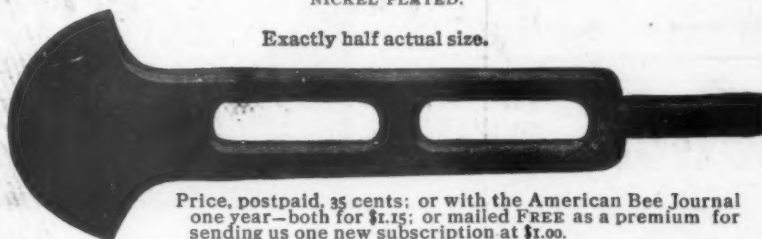
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**American Bee Journal, Hamilton, Illinois.**

# American Bee Journal

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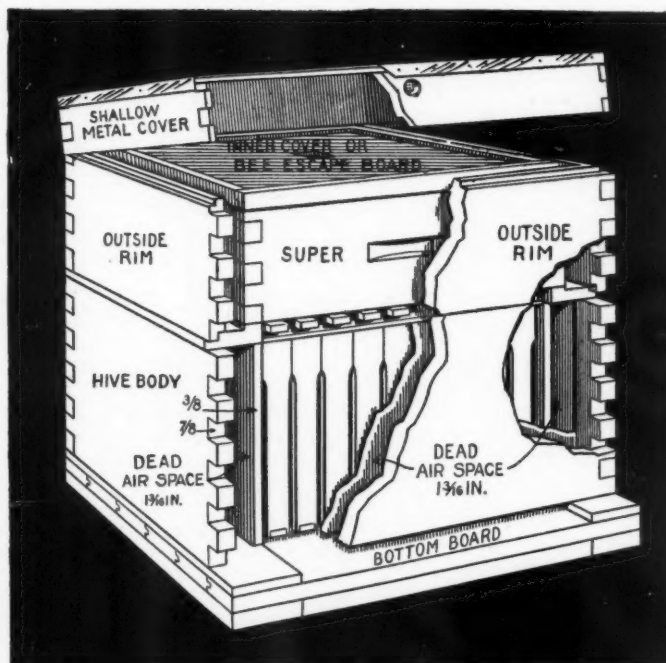
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C. P. DADANT, Editor.  
DR. C. C. MILLER, Associate Editor.

HAMILTON, ILL., MARCH, 1913

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## EDITORIAL COMMENTS

### Cross Yellow Bees

The Editor of *Gleanings in Bee Culture*, in Jan. 15 number, comments upon the statement that very yellow bees are often cross. Italian bees, when pure, are especially gentle. All imported Italian bees are. The breeding for color ought not to destroy that quality. Is it not possible that those cross strains come from a mixture of the Cyprian bees, which were bred so plentifully years ago on account of their bright copper-colored bands and shield? We gave them a full trial ourselves, and have since carefully eliminated them. But why breed for color in any case? It is true, yellow bees sell best. But prolificness and activity ought to be the qualities selected above all others.

### Do Bees Dislike Black?

Mr. John H. Lovell writes very interestingly in *Gleanings in Bee Culture* on this subject, and gives good evidence that bees do not dislike black, but that it is more readily noticed by them than other colors. Hence, they will sting a black hat more readily than a light-colored one. They will certainly sting a dark woolen hat or felt hat more than a straw hat. The latter is made of vegetable fiber, to which they are accustomed, and which they mistrust less than the wool, hair or felt of animals.

Black shows rarely in the fields above the soil. When looking for an enemy, they would be sure to mistrust anything of that color.

On the other hand, the trunk of a tree, a cluster of their own sisters are of a dark color. Attention has been called, in the "Langstroth-Revised Hive and Honey-Bee," paragraph 417, to the fact that a swarm may often be induced to settle on a dark mullein stalk or a piece of black cloth, tied to a pole in full view of the apiary. We have personal knowledge of the value of this suggestion.

Where is the farmer boy who does not know that the bumble-bees of a destroyed nest will rush into the dark mouth of an empty jug if it is placed at the spot occupied by their nest immediately after destroying it? Has the black hole a fascination for them, or do they expect to find the enemy within?

### Foul Brood in Iowa

A letter received from Mr. Frank C. Pellett encloses his report to the Governor of Iowa as inspector for 1912. It shows the disease in 34 counties. Mr. Pellett states that the bill, which carried an appropriation for inspection for 1913, was killed in committee, but that a slightly different bill will at once be introduced. It is said that lack of interest on the part of the bee-keepers is the cause of failure of the first bill. Each bee-keeper should take an interest in the matter and write to his representative and senator about it.

One of the most sanguine bee-keepers of the State, Mr. A. B. Tackaberry, of Cantril, writes:

"The Bee Journal should urge the bee-keepers to write to representatives,

demanding their support. Iowa is a sister State, and you should be interested in its success."

The American Bee Journal has offered to help in every way, but the Iowa bee-keepers must lead the fight. Join hands, friends, and you may yet win this season. Write to your men that they must support the bee-disease bill.

### Death of Grandmother Wilson

We realize now a little more than we ever did before what is meant by "The Vacant Chair." For more than 14 years our home has been brightened by the presence of Grandmother Wilson. January 24, after being up through the day, she went to bed at her usual



MRS. MARGARET WILSON.

bedtime, and at 10 o'clock she very suddenly breathed her last without a pang or struggle. She lacked 22 days of having rounded out 94 years. Her beautiful life was an inspiration to us all, and fragrant memories are left.

C. C. M.

We know that the above lines will



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appeal to the sympathy of every one of the subscribers, hence we publish them just as received from Dr. Miller in a private letter.

Mrs. Wilson gave the example of a quiet ending because of a frugal, peaceful life. A good example for us all.

Margaret Pringle was born in Perwickshire, Scotland, Feb. 15, 1819. With her father's family she came to America in girlhood, and to Kentucky in June, 1838. In the fall of 1841, the family moved to Jo Daviess Co., Ill., where, July 29, 1842, she was married to John Wilson, who preceded her to the better land by nearly 24 years. In 1844, she settled with her husband on the Wilson farm north of Marengo, where she lived until 1898. The last 14 years of her life were spent at the home of her eldest daughter, Mrs. C. C. Miller.

Mrs. Wilson was the mother of eight children, five of whom are now living. Mrs. Sidney J. Miller, Mary E. Wilson, Emma M. Wilson, and John F. Wilson, of Marengo; and Mrs. Annie Stull, of Los Angeles, Calif. She also reared one step-daughter, Eliza Wilson, who became the wife of Rev. J. N. Hutchinson. Her living grandchildren number twelve, with one great grandchild.

## Effects of Feeding Sugar

When a year of failure comes and the bee-keeper finds the brood-chambers of his colonies empty of stores in the fall, with no honey on hand to feed them, it is no small convenience, to put it mildly, that he may resort to sugar as a safe substitute for winter stores. In some localities the bees have filled their brood-chamber with a sort of honey-dew that is practically poison for winter stores, and then what a blessing it is that the unwholesome stores may be extracted and sugar syrup supplied in their place! The American bee-keeper may congratulate himself upon the low price at which he can obtain the best granulated sugar. Pages upon pages in European bee journals are occupied with discussions as to getting sugar duty free for the purpose of feeding bees, either having a law allowing each bee-keeper to receive free of duty so many pounds of sugar for each colony, or else having denatured sugar at a low price. The American bee-keeper has no worry over anything of this kind so long as he can get all the sugar he wants at not far from 5 cents a pound.

But the indiscriminate feeding of sugar is not without its dangers. The man who feeds sugar at a time when it will be stored in the surplus compartment is doing a dishonest thing, that is especially reprehensible because of the general discredit it brings upon all honey. Nor is the feeding at other

times always without danger. It has been found that when the brood-chamber has been unusually well stored with dark honey in the fall, and a good portion of it left over at the time of the opening of the white honey harvest, some of the dark honey would be found in the supers, having been carried there to make room for the queen in the lower story. Of course, there would be the same danger that sugar syrup would be carried up under the same circumstances.

REPLACING HONEY WITH SUGAR.—But sugar is not always fed as a matter of necessity. When honey can be sold at 10 cents a pound and sugar can be bought for half that price, it seems an attractive proposition to empty the honey out of the brood-chamber and replace it with sugar syrup. Suppose we figure a little. Here is a colony in the fall with its store of honey all ready for winter. Let us extract from it 30 pounds of honey and feed back in its place 30 pounds of sugar syrup, 5 pounds of sugar to 2 pounds of water. In 30 pounds of such syrup there will be 21.4 pounds of sugar. We will now have:

30 lbs. of honey at 10c.....	\$3.00
21.4 lbs. of sugar at 5c.....	1.07
Profit.....	\$1.93

If we have an apiary of 100 colonies, that would give us \$193 pay for the extracting and feeding, which might all be done in a week. Even if it would take 2 weeks, or 12 days, we would have \$16 a day for our trouble. Looks good, doesn't it?

But there are things that will cause some shading down of these figures. Time and again it has been shown that when 30 pounds of syrup are fed it means an addition of considerably less than 30 pounds to the stores of the colony. Just why or how this loss occurs does not now concern us; the fact of such loss does concern us, and that fact is well established. Lately, in a German bee journal, a bee-keeper of 30 years' experience reported that during that time he had had 100 colonies or more nearly all the time, and had fed thousands of pounds of sugar for wintering. The bees wintered well, but he had not failed to notice that a colony heavy with such stores the first of October would be very greatly reduced in weight two months later, while colonies which had not been thus fed, but had gathered their own stores of honey, showed no appreciable diminution of weight at the same time.

An item in the loss is the probable transformation of some of the syrup into wax. Whenever we feed bees

plentifully and rapidly, they show a tendency to produce wax, and often whiten their combs with new wax, even though there is but little need of it. There are those who claim that wax costs only two pounds of syrup or honey for each pound of wax, but there are also records of this sort of feeding requiring some 20 pounds of honey for each pound of wax. Putting it between the two, for an average, the wax produced under such circumstances is certainly not a profitable investment.

EFFECT ON THE BEES.—There is another phase of the subject vastly more important, that may have resulted in heavy loss which the average bee-keeper has attributed to anything else rather than the feeding of sugar. When sugar is fed, the cane sugar must be changed to inverted sugar, and that change costs something to the bee, and a loss to the bee is a loss to the bee-keeper. Another item, however, greatly overshadows this. In a late number of Schweizerische Bienenzeitung, Dr. U. Kramer has especially emphasized it. Analysis showed that in the winter stores of sugar syrup, albumen was contained to the amount of 28 hundredths of one percent in the unsealed cells and 36 hundredths of one percent in the sealed cells, or much the same as in pure honey. Now, where did this albumen come from? Not from the sugar, but from the body of the bee itself. This, of course, causes wear and tear to the bee, and unless this nitrogenous material is promptly supplied to the bee, the wear and tear becomes very serious indeed. Dr. Kramer considers it clearly shown that the bees will be weakened thus by the feeding of sugar if large quantities be fed too rapidly, or if the feeding be done during continuously bad weather when the bees cannot secure pollen, or so late in the season that pollen is no longer to be had. He points out that this explains why it is that bees are so eager for pollen when sugar is fed, and why it is that a fine store of pollen will disappear without any starting of brood-rearing, and also why in spring a colony becomes rapidly decimated with continuous feeding of sugar with no pollen available to replace the nitrogenous material.

Taking all these things into account it will be seen that the bee-keeper who figured on a profit of \$1.93 may in some cases sustain a loss to that amount through the replacing of honey with syrup of sugar, as a result of the reduced forces that will be ready to enter upon the expected harvest.

There are some, and they are wise,

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who consider it best to feed sugar only as a last resort to prevent starvation, and who plan ahead to have on hand sealed frames of honey to meet any emergency, so that the last resort rarely or never happens.

### Ventilation of the Hive

We call the reader's attention to the contribution on the above subject, in this number, by Mr. Hopkins, of New Zealand, in answer to Mr. D. M. Macdonald, of Scotland.

A courteous discussion between two men as capable as these cannot fail to be interesting and to bring out some valuable points. Though not wishing to take sides, we ought to state a few facts connected with this matter.

The contestants do not refer to the same conditions in their experiments, Mr. Hopkins lives in a warm country, 37 degrees south of the equator, and made his experiments during the summer. The other, Mr. Macdonald, lives in the north of Scotland, on the coast close to the North Sea, and near the 58th degree of latitude north, which is at the same degree as Sitka, Alaska or the southern part of Hudson Bay. Although the British Isles have a much more temperate winter than the same latitude on the American continent, yet it is clear that wintering bees must be a problem there, very much as it is in the northern United States or Canada, while wintering bees in Auckland, N. Z., is probably less difficult than in Richmond, Cairo, or Wichita.

So much for differences in conditions and observations. We also wish to recall an experience of ours, already stated in these columns some years ago, but which will bear repeating.

The winter of 1884-5 was one of the longest and hardest that we have ever known. At that time we had no faith in moisture absorbents. But we tried to make our bees as warm as possible by sheltering them on all sides but the front, which remained open. The upper story was filled with dry forest leaves, but the ceiling of the brood-chamber remained, as in summer, an oilcloth thoroughly gummed with propolis and water-proof. However, some of these gummed cloths had been damaged by the bees and were perforated. This circumstance resulted in giving us an unexpected lesson.

The bees were confined to the hive for months, the temperature in January going as low as -20 degrees Fahr. (-29 C.) week after week, when the finest sunshine could not raise the degree above 10 (-12 C.)

On opening the hives, in the first

days of warm weather, we found many of the colonies with sealed covers in a pitiable condition, the evaporating moisture having condensed over and around them. Many of them were literally soaked with the thawing ice-water. But the colonies which had openings in the oilcloth were without exception dry in the brood-chamber, the moisture having escaped into the leaves above, which were in many cases soaked with it. This experience was made unexpectedly for us, with some 400 or 500 colonies in five different apiaries, and resulted in our accepting Mr. Langstroth's views which are recorded on pages 351 and 352 of the last edition of our book. We will quote only a few words of the conclusions to which he arrived after the winter of 1855-56:

*"In the coldest parts of our country, if upward absorbents are neglected, no amount of protection that can be given to hives, in the open air, will prevent them from becoming damp and moldy, even if the frost is excluded, unless a large amount of lower ventilation is given."*

In verification of the last part of this proposition, we have seen populous colonies wintered safely, but with great consumption of honey and loss of bees, in hives which were entirely open at the bottom, with no bottom-board whatever.

In our climate, in a hard winter, if the entrance of the hive is too small, it often becomes clogged with dead bees to such an extent as to practically stop all ventilation.

### The Ohio State Convention

As stated in a previous number, the Editor attended the Ohio State Bee-Keepers' convention Jan. 14 and 15, at Columbus. Mild weather greeted us all the way. The contrast of the winter weather this year with that of the previous winter is remarkable. An old friend, now deceased, used to tell us that "intensities balance each other in the world," meaning that anything running to one extreme is sooner or later followed by the opposite extreme.

The attendance was fair, some 40 or 45 bee-keepers being present. The same staff of officers was elected, and we must say that it would be difficult to find anywhere a better chairman or a better secretary than the present incumbents. Mr. Chas. H. W. Weber was elected delegate to the National to represent the State of Ohio.

In the report of the chief inspector, Mr. Shaw, it was shown that there are at least 53 to 54 counties in Ohio infected with American foul brood to a

greater or less extent. The suggestion was advanced that the rest of the counties may show foul brood also when closely inspected. As the first work has been done in 1912, it is difficult to report much progress. But the statements made will awaken the attention of the practical bee-keepers and induce them to be vigilant.

The cost of inspection has been between 20 and 24 cents per colony. It is proposed to ask for a \$3000 appropriation for this work instead of \$2000.

The spraying of fruit trees while in bloom was much discussed. There, as in many other States, the large orchardist excuses himself for spraying during bloom, under the plea that he has to begin early if he wishes to spray his entire orchard in time. They do not claim that spraying during bloom is harmless, but that it is more harmful to the fruit to delay until after the entire fall of the petals. The convention passed a resolution to appoint a committee to take up this matter and introduce a bill in the Legislature to forbid spraying during the bloom of the trees.

A very interesting address was given by Mr. E. R. Root on different subjects pertaining to apiary management. Among other statements, he said that honey which is pumped from one vessel to another, after the crop, granulates more readily than that which is exposed but little to the air. This reminded us that the granulation of the famous Narbonne honey, which is of great whiteness, is hastened by stirring and beating. Not only does it granulate faster and more thoroughly, but its granulation is soft and the color of increased whiteness. In this country, where granulation is rather considered a defect, this method would probably not become popular. But there is no doubt that thoroughly granulated honey, of fine grain, is of good quality.

Mr. Tyrrell, Secretary of the National, was present and urged the bee-keepers to unite with the National. Mr. Tyrrell has very winning ways and good arguments. We trust he may succeed in organizing the National on a rational plan.

Bee-keeping, we are told, is getting more and more into the hands of specialists. The present conditions of disease certainly lead in that direction. The careless apiarist will have to become careful or quit. Shiftless bee-culture will no longer do.

### A New Bee Journal

The California State Bee-Keepers' Association have decided to publish



# American Bee Journal

a bee journal. It will be called the Western Honey Bee, a monthly, and is to be devoted to the interests of the bee-keepers of the West. Many successful bee-keepers live in that part of the country, so that plenty of support for the new bee journal will undoubtedly be found.

The editor-in-chief will probably be Mr. P. C. Chadwick, of Redlands, Calif., assisted by such able western men as J. D. Bixby, L. L. Andrews and Geo. L. Emerson.

We take pleasure in extending our heartiest wishes for success to the new bee journal.

## Flower Pollination

Gleanings in Bee Culture contains an interesting article on this subject by John H. Lovell, page 771, Dec. 1, 1912, being a friendly reply to another interesting article by P. F. X. Ryan in Gleanings for Oct. 15. Mr. Ryan objects to the claim that bees are attracted to the flowers by their bright colors, saying that the theory is confronted by many ugly facts. In this direct connection he says: "Lubbock makes an assertion similar to Sprengel's, that the very arrangement of the colors, the circular bands and radiating lines, are all with reference to the visits of insects. Why, then, I ask, is the apple blossom painted on the back and not on the front? Here, surely, is an instance of the complete unsatisfactoriness of their contention."

The observant bee-keeper who is not a botanist, would be likely to reply to this, "It may be that the bee does not see that outside red with its nose directly in the flower, but to me that red color is very plainly to be seen when I look at the tree either from a distance or close by. Why may it not be thus seen by the bee?" But Mr. Lovell does not choose to make such a reply. Instead of that he takes an entirely different tack, and brings out a very interesting point as to color in flowers. He says:

In New England the whole outside of the young blossom of the wood anemone (*Anemone quinquefolia*), which blooms the last of April, when winds are chill and snow still lingers in the ravines, is often colored purplish red. Red coloring may be observed on many other flower-buds, leaf-buds, and on young leaves in early spring. Because a pigment is useful in some instances in rendering flowers conspicuous, it does not follow that in other cases its role may not be entirely different. It is believed that red coloration is often beneficial to plants in raising their temperature by converting light rays into heat.

That red coloration does actually raise the temperature can be shown by

the following experiment: Place some red leaves, the superficial area of which has been measured, in a small flask of water. In another flask containing an equal quantity of water put a few green leaves with the same extent of surface as the red leaves. Place a thermometer in each flask; close them and set them in the sunlight. After a time the water in the flask containing the red leaves will be found to be 4 degrees C. above the temperature of the water containing the green leaves. The water in the second flask will also be a little warmer than at first, as the green leaves produce some heat. On a cold day in springtime, when the air is near the freezing point, an increase of only 4 degrees C. might be a great benefit to a plant. In the same way red styles may aid the growth of the pollen-tubes.

Mr. Ryan objects to the theory that highly-colored flowers are designed for insects by saying: "Where is there a more highly-colored flower than the poppy? and yet it contributes not one iota of nectar to its insect visitors." To this Mr. Lovell replies that the poppy, like the rose, is a pollen flower, and that bright colors and odors are as valuable to pollen flowers as to nectar flowers.

Mr. Lovell refers the question to the bees themselves. He says: "Let us

put the question to Nature. The way to question Nature is by experiment. I repeatedly counted the number of visits made by the honey-bees to clusters of pear blossoms during a given interval of time. In one instance 8 visits were observed in 15 minutes. I now removed all the petals and watched the denuded blossoms for the same length of time. There were either no visits in some cases, or in others only one or two.

Again, during a certain time the number of visits made by honey-bees and bumble-bees to the flowers of the garden squash were counted. The big cup-shaped corollas were then cut off close to the green calyx. The result was the same as with the pear blossoms—the naked flowers received few or no visits.

Like results were shown by experimenting with borage.

The fact that the bees visited the entire blossoms but paid no attention to the denuded ones notwithstanding their nectar was left undisturbed, is conclusive evidence, Mr. Lovell thinks, "that bright-colored petals are an advantage in attracting the visits of bees."

## MISCELLANEOUS



## NEWS ITEMS

**State Inspection in Texas.**—We are in receipt, through a friend, of the report of the Texas State Inspector of bees, Wilmon Newell, for the year ending Aug. 31, 1912. It being too lengthy for these columns, we will give but the most important points.

The appropriation of \$2500 was expended in the inspection of 31,819 colonies in 10 counties. 283 colonies were found affected with American foul brood. Of these, 230 were treated and the others destroyed. A very gratifying condition is shown of the decrease of the disease in some of the counties inspected since 1911. Uvalde county, in 1911, showed 58 diseased colonies; in 1912, only 3.

The above statements show conclusively that prompt and active measures will eradicate disease where inspection is conducted in a thorough manner. Mr. Newell and his assistants are to be congratulated.

There is no European foul brood, or at least none reported in Texas. This simplifies the work very much. Although Mr. Newell is evidently very thorough, it is probably owing to the

absence of this variety, and to the small number of colonies diseased, that the cost of inspection is less per colony than in other States. Texas is doing the job at the right time.

**Bees Need Special Attention.**—Instead of making the care of bees a part of the general farm work to be shared in by any one or all members of the family, as the passing moment dictates, let some one member—the one who takes the most interest in bees—be made responsible for the profit or the loss from the apiary. This is nothing more or less than beginning organization. With organization, neglect and loss will disappear, and with all the modern improvements above enumerated, at the command of the present day bee-keeper, profit must appear.—*Exchange.*

**Kansas Bee-Keepers.**—The 10th annual meeting of the Kansas State Bee-Keepers' Association was held in Topeka Feb. 4 and 5.

Talks were given by Prof. George Dean and Prof. S. J. Hunter, both of which were highly appreciated by those present. Dr. G. Bohrer, of Lyons, O. S. Mullin, of Holton, and



# American Bee Journal



MR. T. YAWATA IN HIS WELL-KEPT APIARY NEAR OSAKA, JAPAN  
One of the pioneer bee-keepers of his country, who, with 20 years' experience, is teaching the mysteries of bee-keeping.

Arthur Small, of Topeka, read a number of articles of interest to beekeepers.

The following officers were re-elected: President, P. R. Hobble, of Dodge City; Vice-President, Mrs. J. D. Smith, of Troy; Secretary-Treasurer, O. A. Keene, of Topeka.

The next meeting will be held about Feb. 15, 1914.

**Worcester County Association of Massachusetts.**—A series of meetings is scheduled for the members of this association, one for each spring month—March 8, April 12, May 10 and June 14. A summer field meeting is also planned to be followed by monthly meetings in the fall. A series of meetings of this kind will be of great value, particularly to beginners.

**Honey Costly by Mail.**—In a recent number of the Spokesman Review, of Spokane, Wash., appears a letter by A. E. Burdick, of Sunnyside, Wash., with the above heading, and we quote:

My first request for honey by parcel post came from A. B. Walker, of Ford, Idaho. Ford is just outside the limits of the second zone, or a little more than 150 miles, and would therefore

take the third zone rate, which for 11 pounds is 57 cents. Mr. Ford's request was for 10 pounds. The container would call for an additional pound, which would have to be paid for. The producer would be satisfied to get \$1.00 for the 10 pounds of honey, including the container, and in this transaction our dear "Uncle Samuel" is getting by far too much of the consumer's money. I would suggest that the parcel post tariff schedules need revision downward in the interest of both consumer and producer.

**Eastern Illinois Meeting.**—The meeting at St. Anne, although not very numerously attended, was characterized by active discussions. The wintering problem was taken up by men who have had long experience. The majority give the preference, in outdoor wintering, to apiaries sheltered from high winds, with packing of absorbents in the supers and ample ventilation below. Most of those who spoke use burlap or gunny over the top of the frames, with forest leaves, chaff or warm cushions at the top. The President, Mr. Willis, reported having the best success with his colonies in a shed facing south, the front of which is closed in very cold weather by a hinged front, which is let down in

warm days and serves as an alighting board.

In a discussion of foul brood, the universal topic, some one made the suggestion that the carrion or "high meat" odor mentioned in the Bee Journal by Mr. Sladen, might be due to the dying of brood after a comb containing some foul brood has been removed from the hive. Healthy brood, chilled to death, has exactly the smell of carrion, when rotting in a warm temperature. No one present thought that a few cells of European foul brood would give a very pronounced odor.

The large and small hive discussion, which promised so much interest, was not very active, each contestant confining himself to one speech.

The Association was unanimous in favoring active work against foul brood, and Mr. Kildow, the State Inspector, answered a number of questions. As a State appropriation of increased amount is needed, the question of taxation was raised, and the following resolution passed:

WHEREAS, The bee-keepers of Illinois expect increased support from the State Legislature for the inspection of bees, also appropriations for the State Bee-Keepers' Association and for the

# American Bee Journal

teaching of apiculture in the State College of Agriculture.

**Resolved,** That the Eastern Illinois Bee-Keepers' Association assembled at St. Anne this 4th day of February, 1913, declare their willingness to see colonies of bees put on the list of taxable property.

That we recommend a special tax of 2 cents per colony to be levied on all colonies of bees living on the 1st day of April, said tax to be employed for the above-named purposes.

The officers elected at this meeting are: President, G. T. Willis; Vice-President, W. F. Oberland; Secretary-Treasurer, H. S. Duby.

**Syrup Versus Honey.**—An article under the title, "Our Great Sugar Debauch," by Bailey Millard, appeared in the Technical World for January, 1913.

Mr. Millard says that our annual consumption of sugar is 85 pounds per capita, or nearly five times as much as that of the average European.

"The quantity of syrup consumed in cheap city restaurants is incredible. Many a factory girl and department store saleswoman makes her entire luncheon from starchy wheat cakes swimming in "maple cane" or "corn" syrup, and no other dish. Most Americans satisfy their inordinate craving for sweets by the same sort of food at the home breakfast table. This practice is almost unknown in Europe, where they have better digestions than ours.....Out at Rocky Ford, Colo., not long ago they paved a road with molasses, and the experiment proved quite satisfactory, as the surface is free from dust and hard as macadam—surely, a better use for this 'valuable food' than to pave your pancakes thick with it every morning.

"Dr. Herman Partsch, a well-known stomach specialist, declares that the average person eats about three times as much cane sugar as he should. The sugar bowl is banished from the table of his patients, many of whom regain their health by said banishment. For the same product he substitutes dates, figs, prunes and honey."

**Massachusetts Bee-Keepers' Meeting.**—A Bee-Keepers' Day for the Hampshire, Hampden, Franklin Bee-Keepers' Association will be held March 20, during Farmers' Week in the Entomology Building, Massachusetts Agricultural College, at Amherst. Addresses on "Sacbrood," "Value of bees to agriculture and horticulture," "New methods for bee-keepers," etc., will be given.

**Mississippi Valley Magazine.**—The Mississippi Valley Magazine, published at Quincy, Ill., contains a mention of

the American Bee Journal and a quotation with complimentary comment of what we said, page 9, concerning the spontaneous growth of weeds on the river bed. We wish to retaliate. The Mississippi Valley Magazine is the representative of a growing cause. We wish it as lasting a success as that of the immense valley it represents.

**North Texas Meeting.**—We have been notified that the North Texas Bee-Keepers' Association meets the first Wednesday and Thursday in April at Greenville. All who are interested are cordially invited to attend. The program has not been completed as this goes to press, but a large and interesting meeting is assured.

**Northern Michigan Bee-Keepers' Meeting.**—The Northern Michigan branch of the National Bee-Keepers' Association will hold their next annual meeting at Traverse City, Wednesday and Thursday, March 19 and 20. The head-

quarters and meeting place will be at Hotel Whiting. A good program will be prepared, and we would like to see many new faces as well as the old ones.

IRA D. BARTLETT, Sec.  
East Jordan, Mich.

**Illinois Inspection.**—I desire all the bee-keepers in the State of Illinois to send me a postal card, stating whether or not there is any disease in their locality, or if they have any suspicion that any bee-disease exists in their neighborhood. I will place their name on my mailing-list and mail them my second annual report or bulletin which is now in the hands of the printer.

This bulletin should be in the possession of every one who keeps bees, whether for profit or pleasure. Also state if you wish the inspector to visit your neighborhood the coming season.

A. L. KILDOW,  
Putnam, Ill. Chief Inspector.

**Death of W. B. Tegetmeier.**—In November last, when in his 97th year, the death occurred in London, England, of W. B. Tegetmeier. At one time he



UNDER THE SHADE OF THE JAPANESE MORNING-GLORY.



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turned his attention to bees, and was the first to use, or at any rate describe (1859) the frame hive in England, unless we include the obsolete type invented by Munn. In 1858 and 1859 his observations on the formation of the cells of the honey-bee were published. Darwin, in "The Origin of Species," records his repetition of Mr. Tegetmeier's experiments in cell production.

A small, anonymous work of 30 pages, written by him, entitled, "Bees, Hives and Honey," was published in 1865.

At one time, about 1860, Tegetmeier was secretary of a bee-keeping society, but appears never to have been connected with the British Bee-Keepers' Association. GEO. W. BULLAMORE.

**Death of D. H. Coggsall.**—The bee-keepers form a closely related brotherhood, and take much interest in one another's affairs. This is the more true of those in the public eye.

Mr. David H. Coggsall, of Groton, N. Y., died suddenly in Sayre, while about to take a connecting train for Florida.

Mr. Coggsall was born Dec. 1, 1847, in Groton, in which township he made his home all his life.

On Feb. 24, 1869, he was married to Clarinda F. Smith, also of Groton.



THE LATE D. H. COGGSALL.

Three children were born to them, two of whom reached adult years, Mrs. H. J. Blanchard, of Groton, and L. L. Coggsall, of Locke.

It was as an apiarist Mr. Coggsall was best known. He became interested in bee-culture in 1861, when he

was given a swarm of bees by his grandfather, William Smith.

He began a series of experiments with them, and was very successful. He branched out in the business, and at one time had about 800 colonies. He was the first producer and shipper of extracted honey in this part of the State.

Mr. Coggsall bought a place in Stuart, Fla., about eight years ago, and had been there every winter since. He took a great deal of pride in the place, and built a house in the center of the three lots which he purchased. The rest of the property he set out to citrus fruit trees and cocoanuts. He also bought another lot adjoining the St. Lucie River, and built a dock and boat house for housing his gasoline launch, which has a capacity of 15 people. Without bees, of course, the place would not have been complete, so he purchased a few colonies, enough to keep his own table and his friends supplied with honey.

**Arabian Honey and Wax.**—The following is from a report by Consul Walter H. Schulz, Aden, Arabia:

"Arabian honey, which is frequently mentioned by historians as an important export from Aden in early times, is no longer an item in the export trade. Small quantities, however, continue to come from Mokalla, 400 miles east of Aden, and it is also exported from that place to India in small quantities. The decline in the honey and wax industry has been a gradual one for centuries, and is attributed to a diminution in the rainfall. The honey that comes to market in Aden is packed in gourds and goatskins, and sometimes in hollow pumpkins.

"Wax imports and exports are considerable, but include little or none of the Arabian wax, consisting largely of importations from Eritrea and French Somaliland."

## BEE-KEEPING FOR WOMEN

Conducted by MISS EMMA M. WILSON, Marengo, Ill.

### Winter Work

Mr. Byer says, page 52, "Here in Ontario, during the months of January and February, the bee-keepers do about the same thing as their bees—practically nothing, in so far as real work in the apiary is concerned."

To be sure, Mr. Byer, but isn't there a lot of work not really included under the head of work in the apiary that bee-keepers can profitably do during winter months?

Pretty good plan to clean all supers and hives not in use, and do any repairing that is needed. Make new hives, frames, supers, etc., if any extras will be needed for the coming season. If you use T-tins have them all cleaned, too. It gives one a comfortable feeling to know that everything is shipshape and ready for use at a minute's notice.

In this "locality" we like to have our sections all made, filled with foundation and put into supers, all ready to set on hives when needed. It is not pleasant to put in foundation in very hot weather, when the foundation will crumple down under your fingers. Of course, you can do it if you get up early enough, and use only the early morning hours, but why not have it all done before the weather gets warm, and have a comfortable time doing it?

Now, Mr. Byer, I venture to say there is a whole lot of work you do yourself during these same winter months. You wouldn't be a bee-keeper if you didn't. Own up now, don't you do heaps of planning about the bees while they are quietly taking their winter nap?

The winter is an excellent time to read up on bee-literature, especially to go over the bee journals that received

only a hasty reading during the busy season.

[Not only is winter a good time for this, but the rainy days of March and April offer another excellent opportunity.—EDITOR.]

### A Lady Bee-Keeper of California

I am sending you a couple views of apiaries, as requested in the Bee Journal. I feel indebted to a lady tourist who subscribed for me, and I ought to pass it on. She saw my bees working in February last. I showed them to



A HIVE PERCHED ON A PEDESTAL LIKE A SUN DIAL.

her, as I would to any other traveler, when I found that she had kept bees 10 years or more (Mrs. J. J. Glessner, of Chicago). She also gave me the book "Fifty Years Among the Bees." There are many who read the Bee Journal in the West.

The hive on a pedestal looks like a sun dial, and interests our visitors. These bees are in the valley. The



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others in the mountains, 5 miles away, will barely live, as the sage failed on account of the drouth. My 40 years of bee-culture have all been in California, with both pleasant and funny experiences. I read "Forty Years Among the Bees," loaned to me by a bee-



CALIFORNIA BEE-YARD OF MRS. LUCY SEXTON, OF GOLETA, CALIF.

keeper years ago. This book has put me in the best way of bee-keeping.

I will try to organize a club of California women bee-keepers, and will send more views.

(MRS.) LUCY SEXTON.  
Goleta, Calif.

Your letter is very welcome, together with those dainty pictures. Your 40 years' service certainly entitles you to rank among the veterans. We will be glad to have further items drawn from your long experience.

## FAR WESTERN



## BEE-KEEPING

Conducted by WESLEY FOSTER, Boulder, Colo.

### Moisture Over the Winter Cluster

The writer examined an apiary of about 100 colonies Feb. 2. The covers were removed and the general conditions noted. About half of the apiary had the Acme tin cover and inner cover which gives a space about 2 inches between the inner cover and tin cover. The holes in the center of the inner covers were closed by a shingle being laid over them or a piece of burlap stuffed into the hole. A few of the colonies had comb-honey supers still on, and these seemed to be drier and the clusters spread out better than some of the others. A burlap cloth placed over the frames, and the tin cover with a 2-inch space kept the bees in driest shape, unless part of the burlap extended outside of the cover when it would siphon the moisture into the hive and keep the bees damp. A few flat covers with burlap between cover and frames were also unsatisfactory, as there was considerable moisture and frost around the edges of the interior of the hive.

It is evident that the inner cover with a small hole in the center for the passing off of moisture laden air is

### Honey Recipes

**HONEY-AND-NUT SANDWICHES.**—Mix one cupful of honey with two teaspoonfuls of lemon juice, then stir in enough finely chopped nut meats to make a stiff paste. Spread on slices of buttered bread, cut into pieces, place two together and serve.

**HONEY CANDY.**—One quart of honey, three heaping tablespoonfuls of butter, two tablespoonfuls of vinegar, half a teaspoonful of baking soda, and two teaspoonfuls of lemon extract. Put the honey, butter and vinegar into a saucepan, and boil until the mixture will harden when dropped into cold water; then stir in the baking soda and the lemon extract. Pour into a buttered tin to cool. When half cold mark into squares, and when cold break apart.

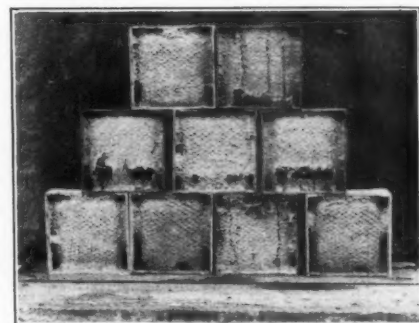
**HONEY FRUIT CAKE.**—Four cupfuls of flour, half a cupful of butter, three-quarters of a cupful of honey, one-third of a cupful of apple jelly, two eggs, one teaspoonful of soda, one teaspoonful of powdered cinnamon, one teaspoonful of grated nutmeg, half a cupful of currants, half a cupful of chopped candied orange peel, a quarter of a cupful of warm water, and a quarter of a teaspoonful of salt. Warm the butter, honey and apple jelly; remove from the fire; add the eggs beaten, then the soda dissolved in the warm water; add the spices, flour and fruit. Turn into a buttered-and-floured tin, and bake until ready.—*Ladies' Home Journal.*

agricultural demonstration train covering the larger part of Colorado, beginning Feb. 17 and continuing for one month. Bee-keeping will be represented with an exhibit, and the writer will go as attendant.

### Fremont County Bee-Keepers Organize

Bee-keepers met in Canon City a few weeks ago and organized the Fremont County Bee-Keepers' Society, with F. W. Brainard President, and Wm. Babberger Secretary-Treasurer. The association is small, but there are several elements that augur well. Most of the members live within a few miles of Canon City, so they can get together quickly. They have all suffered from fruit-tree spraying—this has driven them together for defense.

Colorado now has four county organizations manifesting a semblance of life, and there are three or four dead ones. But organization among the bee-men for real benefit never was in better shape than at the present time.



THESE SECTIONS AVERAGE ONE POUND. THE LEAKY CELLS WERE BUILT ON A CURLED FOUNDATION STARTER AND FAST TO THE SEPARATORS.

### Prospects and Locations

The bee-men are now busy getting supplies ready for the coming season. Prospects are good, and we hope for a favorable season.

A letter just received from a bee-keeper in the Middle States asks about prospects in Colorado, especially the Uncompahgre Valley. It is hard for me to compare Colorado with the Middle States, for I know little about the locality where the gentleman is now located. Bees as a source of income are kept by a large number of people, but money is lost in Colorado bee-keeping about as quickly as anywhere. The Uncompahgre will compare favorably with any of Colorado's valleys. It lies in Montrose and Delta counties principally, and is supplied with an abundance of water—too much in places, as considerable portions of the land is seepy.

Eastern Colorado has better roads, and is more developed than the western part of the State. It has less water available for irrigation, but freight rates are less to and from markets. Land is possibly more productive in western Colorado, and the honey crops have been more uniform, although failures have been experienced on the Western Slope. Bees may be pur-

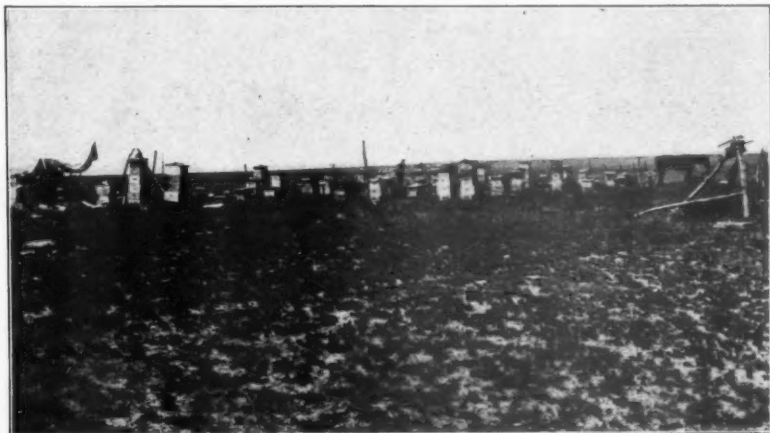
### Bee-Keeping on a Demonstration Train

The Colorado Agricultural College Extension Department will operate an

# American Bee Journal



BATCHING TENT AT THE OUT-YARD OF A COLORADO BEE-KEEPER—60-POUND CAN CASES USED FOR CHAIRS AND SUPPORTS FOR THE TABLE.



A TYPICAL PLAINS APIARY OF THE FAR WEST.

chased in many places all over Colorado so that a bee-man could buy cheaper than to move in a large lot. A personal investigation is recommended before a locality is selected.

## Alfalfa Weevil Barred

An important amendment to the alfalfa weevil quarantine now in effect in California against Utah, Wyoming and Idaho, to include shipments of

nursery stock into California from these States, was authorized today by State Horticulturist Cook. Hereafter no nursery stock from Utah, Idaho or Wyoming will be admitted unless wrapped in excelsior or some material which would not contain the pest, and unless the containers, both boxes and cars are fumigated.

The order was issued to further insure the \$50,000,000 alfalfa crop of California from danger from the weevil.

The quarantine now exists against alfalfa hay, seed, bees, bee-hives and nursery stock. It is news to me that the alfalfa weevil pest may be spread by the shipment of bees and bee-hives. Of course, this would apply only to used bee-hives. Is not this a new way of keeping Utah and Idaho bees out of California?—*Orchard and Farm.*

## The Colorado Apiary Act

A bill with the following heading is now before the Colorado Legislature:

"House Bill No. 144, 'A Bill for an Act,' to establish a division of apiary inspection and investigation under the State Entomologist; to provide for investigations in bee-culture and the inspection of bees for contagious diseases; to provide for the prevention and spread of bee-diseases; to provide for country apicultural inspectors; to provide for the transfer of bees from box-hives; to provide for the prevention of the poisoning of bees by fruit-tree sprays; to provide penalties for violations of the provisions of this act; to make an appropriation for carrying out this act, and to repeal all acts and parts of acts in conflict with this act."

The latest word from Hon. O. C. Skinner, Speaker of the Colorado House of Representatives, states that this bill, which was referred to the Committee on Agriculture and Irrigation, has been reported out to Committee of the whole with the recommendation that it pass.

[The bill is too lengthy to be inserted whole in the Bee Journal. Mr. Foster can probably furnish copies of it to parties interested.—EDITOR.]

# SOUTHERN



# BEEDOM

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

## The Need of Pollen in Early Spring

Many of us do not realize the importance of supplying colonies with pollen early in the spring when the bees are not able to obtain it from outside sources. There are various circumstances under which bees are unable to breed up early, but one of the chief reasons is the lack of pollen with which to prepare the larval food. There are summers during which all the stored pollen may have been used in the breeding period, followed by a fall with no pollen yielding bloomers, and

the bees go into winter quarters without a sufficient supply of this food material. This may be followed by a cold, long, drawn-out spring, during which the bees are unable to gather any pollen, if there is any to be had.

Many localities are without early pollen yielders even in favorable spring seasons. It is apparent, therefore, that much can be done by the bee-keepers in furthering the progress of their colonies in early spring, so that they may be running over with bees for the honey flow, otherwise they may often

struggle under difficulties. When the time of heavy breeding is at hand, ascertain whether the bees have sufficient pollen in store or are able to get it. If not, it should be supplied artificially.

The following letter is from W. R. Cunningham, of Rayville, La.:

"FRIEND SCHOLL:—On Sept. 16, I hived a late swarm, put it into an observatory hive and placed it in one corner of my living room, cutting a hole through the wall so the bees could go in and out. I gave the bees a deep comb with about 4 pounds of honey, with the intention of giving more as they needed it. I noticed on Jan. 11 and 12 that the workers were carrying out a few dead larvae. The thought came to my mind immediately that I had not supplied them with pollen. I gave the colony a tablespoonful of flour. I had read of Dr. Miller's advice to feed flour as a substitute for pollen.

"To my surprise the bees fairly



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rolled in the flour. In about two hours they had it all stored in the combs, so I gave them another spoonful. Next morning that was also gone, and I gave them three more. The elm began to bloom on the 16th. Since then all my colonies have done their utmost at gathering pollen and breeding up rousing colonies.

"After I learned that this colony in the house was so much in need of pollen, I thought it best to go out and investigate my other colonies. I put a quart cupful of flour near their usual feeding place, and you should have seen those bees scampering over each other and carrying the pollen home. Some of them fairly rolled in the flour, and were as white as could be, and there was a constant stream of bees flying to and from every colony. It only took them part of an afternoon to carry this amount to the hives.

"Now, I believe that if bee-keepers were to feed their bees some substitute for pollen in the early spring or the latter part of the winter, they would have rousing colonies with young bees that would be ready to gather the first honey flow."

[Flour substituted for the missing pollen in early spring is advised by most of our text-books. We usually pack it with the hands, in shallow boxes, located in some sunny, sheltered spot, as soon as the bees are able to fly. But we did not know that such a procedure was advisable as far south as Texas or Louisiana. There is no doubt of the efficiency of this substitute, if nothing else is to be found in natural pollen. Pressing the flour down into small ridges or lumps keeps the bees from drowning in it.—EDITOR.]

## Comb or Extracted Honey?

Well do we remember when bee-keepers discussed the matter of producing more extracted honey than comb. Some bee-keepers even went so far as to say that extracted honey would replace comb honey altogether. I have been ridiculed for making bulk comb honey production my specialty. But the production of honey in the extracted form has exceeded the demand for it, and there has been a greater demand for comb honey.

There is always a keen demand for all the bulk comb honey that bee-keepers produce in connection with extracted honey; they have no difficulty in disposing of the former, but it takes them much longer to sell their crop of the latter. I have bought quite a number of lots of extracted honey that the bee-keepers had trouble in selling, although they had disposed of their bulk comb honey early in the season.

We are making a specialty of bulk comb honey, and this may have a tendency to bring us more orders for that kind, but we do not advertise, and in sending out our price lists we quote both comb and extracted honey. Even our letter heads show that we are producers and dealers of both.

We are not advocating what kind a bee-keeper shall produce. Find out

what your market requires. Of course, there are other circumstances that must be taken in consideration. Not all localities are good enough for comb-honey production, since the honey flows may not be strong enough, or the source of honey may not be a suitable one for fancy comb honey. In this case it will be better to produce extracted honey. These differences are felt more where section honey is produced, while it is not so difficult to produce bulk comb honey, with which we have to do here in the South to a greater extent.

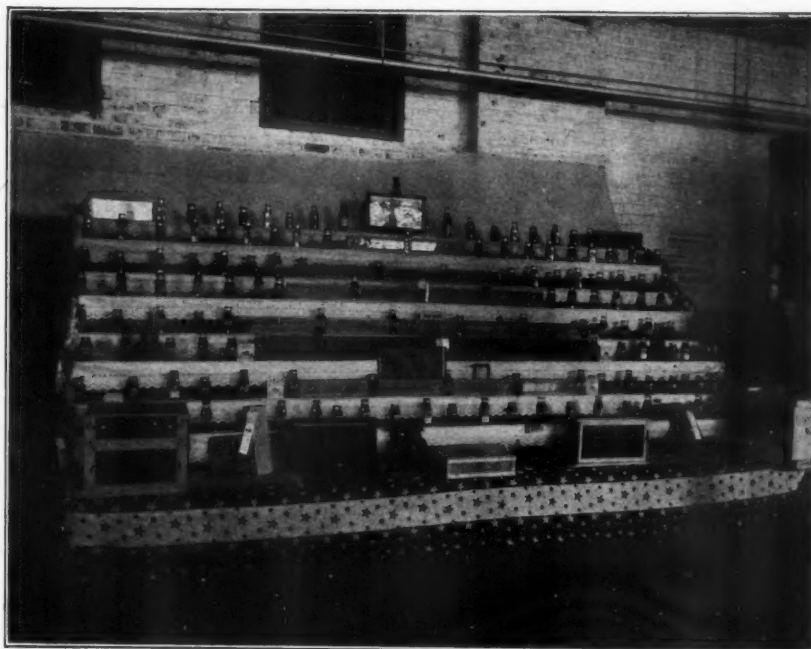
A word of caution. It is, as a rule, to the detriment of the apiarist to jump from one thing to another every time something new comes up. It costs money to make rapid changes, and the change may prove an unprofitable one. If it is thought that another method is better, the change should be made gradually. If there is an advantage in

a change after a fair trial on a small scale, it is still time to make a more radical change.

## Texas Prospects Most Favorable

Up to this time the prospects for a honey crop in the great Lone Star State are most favorable. It is to be regretted that we have planned every year lately for a good old-time honey harvest, and have missed our mark. However, this season begins somewhat differently. The great amount of moisture from the numerous rains that have prevailed over almost the entire State of Texas during last fall and the past winter, makes the outlook better by far than it has been for several years.

The bees seem to be in good shape and well supplied. Sometimes the season begins well, to end without a harvest, but it is hoped that this will not be the case this year.



HONEY AND BEE APPLIANCE EXHIBIT OF LOUIS WERNER, EDWARDSVILLE, ILL., AT THE MADISON COUNTY CENTENNIAL FAIR.—Such exhibits at local Fairs help greatly to educate the public and increase the demand for honey.

## CANADIAN



## BEEDOM~

Conducted by J. L. BYER, Mt. Joy, Ontario.

### Different Climatic Conditions

Our ideas of the climatic conditions of some other countries are apt to be at variance with reality. For instance, I have always thought that Switzerland had a very mild climate, but judging by what Mr. Anthony Biaggi, of Bellinzona says, some parts of the country at least have quite severe winters.

I ordered a few queens from Mr. Biaggi, and writing me a very interesting letter, he says: "Here on the Italian slope of the great chain of the

Alps that bound north Italy, we have a very rigid winter, snow falls in November and remains until March." While nothing is said about the intensity of the cold, it must be fairly continuous or else the snow would not stay so long.

Our weather in Ontario this winter is rather peculiar, for until Feb. 1 it was much milder than the average winter. Since that date until Feb. 11 it has been quite cold, but at no time this winter have we had more than 6 inches of snow, and now we have none at all. How the clover will stand the



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winter remains to be seen, but naturally we would feel safer if it had a good covering of snow.

## Transferring Bees

A lady bee-keeper in Florida writes me asking how to transfer bees into modern hives from "gums." Not knowing much as to the nature of the said "gums," I was at a loss to advise what would be the best way. My own experience in transferring bees has been with but a limited number of box-hives, but the following plan is the best for this job I think, and will apply equally well to any kind of a "gum." I think it is useless to advise some complicated plan to a person who has had but little experience with bees, as failure is sure to result, no matter how good the plan may be in the hands of an expert:

If I buy a few box-hives I leave them alone until they are strong enough to get the notion of swarming. If there are no openings in the top of the box, I make some with an auger, or the box may be turned upside down, providing the bottom-board is loose. Place a hive-body full of nice combs over the box-hive, and if it does not fit exactly, a few laths or other thin pieces of wood can be tacked around the sides where the two hives join. In a short time the queen will go above into these combs and start to lay.

Some day, after having prepared the colony in this way, take a queen-excluder, carefully open the top hive and lift up a comb or two to see if the queen is above. If she is on the combs quietly lift up the top hive with the combs in it, and slip the queen-excluder on top of the "gum." Then place the top hive back over the excluder.

All that is necessary now is to leave them alone for 21 days and then take away the lower hive, placing the top one on the stand in its place. All brood will be hatched out of the old box-hive, and the bees can be smoked or driven out and the contents broken up and disposed of as you see fit. There is nothing new in this plan of transferring, but I doubt if there is a better way of transferring when you wish to save time and avoid a tedious job.

## The Inspector's Salary

Much has been said in the past relative to the inspection of bees. I am very much in favor of a strict system of inspection, but if we are to have the efficiency necessary for this work, the men who are sent out on inspection must be remunerated better than they are now. That statement from the British Bee Journal, copied in the American Bee Journal, page 43, gives my ideas on the matter so forcibly that I cannot forbear quoting the same again by way of emphasis: "Unless these men have had the practical experience of managing numbers of colonies successfully, they are surely not fit to be sent out to exercise compulsory powers over those of their neighbors; but if they have had such experience they must be worth a great deal more than they get."

It is easy to get men to go out on

inspection work, but it is not easy, under present conditions, to get men properly qualified. Ontario has some good men at present who are acting as inspectors, but there have been a few who were not qualified for the work. The qualified men are, as a rule, giving their time at a sacrifice, for if able to inspect efficiently, they could make more money devoting the time to their own interests.

I am speaking from experience, for I was at the work 4 years myself. The present allowance is, I believe, the same as when I was at the work, viz., \$5.50 per diem, and you pay your own hotel bills—livery and railway bills being paid by the department. This means about \$4.00 a day net, and while that may sound like a big figure to some, bear in mind that often a bee-keeper has to go away from home when one day's absence may mean many times \$4.00 of loss to him. While I am not a moneyed man, used to getting a big annual return, I could not afford to go on inspection work any more. The job would not tempt me if I were offered considerably more than the present remuneration.

## Feeding in the Fall

On page 56 of the American Bee Journal, the Editor writes that J. L. Byer says "that in Ontario they feed the bees as much sugar syrup as they will store in the brood-chamber before winter." "They," in this case, means only a small percent of bee-keepers who winter on the summer stands, but the few who practice this plan do not "think" it pays; they *know* it pays. While I know it pays, I have never put all of my colonies in that condition because of the extra work, and *fancied* extra cost. I say, "*fancied*," as I doubt if we have many seasons when the plan of heavy feeding, for outdoor wintering in a cold climate, will not pay good interest on the money invested, and return the principal the first season.

Mr. McEvoy contracts his hives when using this plan, placing his bees on five or six solid combs. At least one of our most successful men feeds his 10-frame Langstroth colonies all they

will take late in September or early in October, and he gets it all into the bees, too, before the clover flow comes in June. But this is a dangerous doctrine to preach, as it would surely lead to overstocking if all practiced it. But no danger of that, too much trouble and too big a bill for feeding to suit the majority, especially as we have an occasional winter when the bees come through fairly well without feeding in the fall.

## Carniolan Bees Preferred

At various times in the past I have championed the Carniolan bees, and have often wondered at some of the bad reports made in regard to them. I have been forced to the conclusion that, in some cases at least, mixed stock must have been tried instead of a good strain.

In a kindly appreciative letter lately received from a friend in Nebraska, I quote the following. It shows that at least a few appreciate the good qualities of those bees: "I wish to thank you for bringing the Carniolan bees to my attention. They have proved very satisfactory, as they are hardy, winter well, build up rapidly and early in the spring, and cap their honey white. It is a pleasure to handle them, as they are quiet and gentle after having handled a cross colony of Italians."

## Wintering on Full Combs

The editor of one of our bee journals writes me: "I am with you on the winter-nest proposition, as I have 127 colonies fed up in the way you advocate—all wintering on the summer stands."

The plan referred to is that of feeding the colony all they will take in the fall (brood-nest can be reduced if desired), so that the bees can go into winter quarters on solid combs. My friend says that he will report in the spring as to how they winter; but I feel pretty sure, even now, as to the nature of the report, and venture to forecast that not a single colony will be the worse for the winter, unless queenlessness or other causes not relating to wintering affect them.

## BEE-KEEPING



## IN DIXIE

Conducted by J. J. WILDER, Cordele, Ga.

### Queen and Drone Traps to Control Increase

FRIEND WILDER:—I run my bees for comb honey, and do not wish any more increase. I haven't the time to go over the combs every 5 or 6 days during swarming time to destroy queen-cells. Can I use queen-traps over the entrances to confine the queens to the hives, and when the bees swarm let them go back, and save the swarms and get more honey? Should

I kill the queens as I catch them in the traps, or let them go back in the hive? Jefferson, Ga. W. A. GORDON.

Some years ago I tried traps for keeping down increase, but I was not successful, and I wonder if any one has ever been successful with them for this purpose. The bees will kill the old queen after several efforts to swarm, if she is confined there. When the young queens hatch they swarm again, and may keep it up for some time, if the young queens are confined

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in the hives in the same manner. Very often a small, inferior queen will hatch out and squeeze through the trap and away goes the swarm. Another objection is that young queens cannot get out to mate, and drone-layers and losses are sure to be the result.

If the old queens are killed as they are trapped, and you take out all the queen-cells except one, the bees will start more cells and swarm unless the combs are cleaned of brood. If the combs containing eggs and young larvæ be removed it involves considerable work, and the colony will dwindle down fast. Queen and drone traps are designed to catch queens and drones, or to confine drones to certain hives. They may be placed over the entrances of hives during the absence of the bee-keeper at swarming time, so as to save any swarm that may come out. The traps should be removed on his return.

[We believe Mr. Wilder's view is the correct one. Queen and drone traps will do for confining the swarm *temporarily*, but the killing of the old queen is often the result of keeping the traps on too long.—EDITOR.]

## How to Hive Bees

DEAR MR. WILDER:—I want to know your method of hiving bees. I lose many swarms each season because I cannot hive them; or after I hive them they leave. I will appreciate the information you can give me.

Platteville, Ala. JOHN C. THOMAS.

The loss our industry sustains each season from the escape of swarms is something to lament. This great loss is mostly borne by those who are just entering our ranks, and it is the direct cause of much discouragement. No one should try to handle bees without a good bee-veil and smoker. If these are properly used there is no danger from bee-stings. A swarm-catcher is the best thing to hive bees with if used as directed, but a lot of beginners prefer to climb trees after swarms, and have all kinds of sad experience. To such bee-keepers I would suggest that the ready hive be placed on the ground or directly under the swarm of bees if possible. A little earth should be placed in front of the alighting-board, and leveled up to it so the bees can easily march into the hive when they are placed in front of it.—[A cloth or coarse gunny sack will serve the same purpose.—EDITOR.]

A lard can or large tin-pail makes a good vessel to catch a swarm in, as the bees cannot crawl out so easily. If the swarm is low enough to be reached from the ground, bench or table, the can should be held up under the bees as close as possible. Then the swarm is quickly jarred off the limb into the can and dumped in front of the hive. If the bees settle high up on the body or limb of a tree, use a pole of sufficient length and attach the can or pail to it.

It is not necessary to beat pans, ring bells, shoot guns, or make any great noise to settle swarms of bees, nor is it necessary to dampen them after they have settled. To keep them hived after

they have marched in is an easy matter. Fasten an entrance guard or queen and drone trap over the entrance of the hive, then the queen cannot escape to go with the swarm, and it will have to return and be content. An entrance guard costs but 15 or 20 cents, and one may be worth from \$15 to \$20 to you during the season. In two or three days it should be removed, as the bees will then be contented and settled down to work. A swarm of bees should be placed on their permanent stand just as soon as they are hived.

## Do Bees Need Salt?—Overdoing It

FRIEND WILDER:—I washed some salty meat some time ago and poured the water on the ground near the apiary, and soon bees were taking it up. I then gave them some salted water, and they seemed to prefer it to fresh water.

AUGUSTUS WILLIAMS.

Barwick, Ga.

I do not know that bees require salt, but I don't suppose they would object

to a very small amount of it in their drinking water. I have tried to run them away from public watering places a number of times by sprinkling them heavily, but this had no effect. Very often when meat is cured a solution containing considerable sugar is used. Such might have been the case with you, and the bees were after the sugar the water contained.

I remember seeing the "saving power of salt" tried on a swarm, and it did not prove very effective. It was a swarm a distant neighbor hived. As soon as they were in, he raised the cover of the hive and gave them a good salting. He was very anxious for a start in bees, and thought this the way to keep them, but they were soon out on a limb. He sent for me, and on my arrival he expressed his surprise at their deserting the hive. He knew they had been salted enough. On examining the hive I found it nearly half full of salt. He told me his neighbor gave him the instructions to use it, and the more the better. He had carried out the instructions.



ERECTED TO THE MEMORY OF A QUEEN-BEE WHICH WAS ACCIDENTALLY KILLED WHILE  
INVESTIGATING—THIS MONUMENT STANDS NEAR THE APIARY OF MR. YAWATA.



# American Bee Journal

## CONVENTION



## PROCEEDINGS

### Sidelights on the National Meeting

The meeting at Cincinnati Feb. 12 and 13 was not very largely attended, only about 60 bee-keepers being present. But the meeting was harmonious. Changes were made in the Constitution according to the needs of present conditions. The committees selected to pass on the publication of the Review made some kindly criticisms, but recommended to accept the purchase of the publication. It was very evident every move taken by the Board of Directors was made in good faith and without profit to themselves, and that an honest management is carried on. All are willing to continue on the same footing. So no great opposition was shown by any one of the delegates.

In addition to the changes in the Constitution, which will be published in our next number, we will also publish a new set of honey grading rules as proposed by two committees appointed by the Board of Directors, a committee of producers and a committee of dealers.

A resolution was passed to ascertain whether the former incorporation of the association is still in force. If it has been outlawed the Secretary is to secure a fresh incorporation, provided the cost is less than \$50.

The officers elected are as follows:

President, Burton N. Gates, of Massachusetts; vice-president, H. A. Surface, of Pennsylvania; secretary, E. B. Tyrrell, of Michigan; treasurer, C. P. Dadant, of Illinois. Directors for three years, E. D. Townsend, of Michigan, Wilmon Newell of Texas and Wesley Foster, of Colorado; for two years, J. M. Buchanan of Tennessee; F. B. Cavanagh, of Indiana.

An enthusiastic resolution was passed to extend a vote of thanks to the former General Manager, N. E. France, for his devoted and disinterested management in past years and a committee appointed to receive subscriptions for a lasting present to be given him in token of the esteem in which he is held. Although many of the delegates had already left for their homes, subscriptions to the amount of \$48 were received in a few minutes and a committee composed of Dadant of Illinois, Cavanagh of Indiana and Allen of Wisconsin, was appointed to handle all subscriptions for this purpose and select a durable present.

Mr. France is very modest and for this reason the committee does not see fit to solicit any one. Those who are in favor of this action will please send their subscriptions to this fund at once to the chairman of the committee C. P. Dadant, Hamilton, Ill. A list of the subscription and the use to

which it will be put, will be sent on request to any one of the subscribers.

A very decided expression was given to the advisability of holding at least one meeting a year in which only bee-keeping subjects will be discussed, where every one present will be on an equal footing with everybody else, without delegate privileges as to votes and where actual business will therefore be tabooed. A resolution was passed instructing the executive board to prepare at least one such meeting.

In the afternoon of the second day the Chamber of Commerce of Cincinnati treated the members to a trolley ride and a visit to the Rockwood Clay Works and the Cut Glass factory. The last session of the convention reached well into the night of the second day.

### Report of the Washington State Convention

The Washington State Bee-Keepers Association met at North Yakima, January 8 and 9, 1913. There were present some of the most extensive specialist bee-keepers of the state, numbering their colonies by the 400 and 500 and more.

The opening session was at about 11 a. m. and Judge Milroy welcomed the convention to the city in a very pleasing address.

#### SPRING MANAGEMENT OF BEES.

Robert Cissna, talking on this subject, advised a careful examination of the apiary. He marks only the weak and queenless colonies, and unites, putting the colony with the queen on top. Be sure the bees have enough honey to carry them along. More loss is occasioned through starvation in winter than from any other cause. Feed the weak colonies if worth saving, with combs of honey taken from stronger colonies, if you have no extra combs of honey on hand from the previous season.

#### THE NATIONAL AND ADVERTISING HONEY

Mr. George W. York, of Sandpoint, Idaho, former president of the National Bee-Keepers' Association, then spoke on the National Association, what it is doing, and proposes to do. He urged that every bee-keeper's organization become affiliated with the National, for "In union there is strength"; and there should be the fullest spirit of co-operation on the part of all.

Pres. Burdick spoke of the Washington Honey Producers' Association, of which he is manager. They handled over a carload of honey the past season at an expense of 10 per cent to the Association. He believes that

the parcel post will help when it once gets under full headway, but it will need some improvement over its present plan of operation. In a co-operative organization, it is essential that every member be absolutely loyal, even if at times they may lose a little. In the end, success would be assured.

#### PREPARING BEES FOR WINTER.

Mr. Virgil Sires said that a goodly portion of young bees, a good queen, with plenty of good stores, and a hive-cover that insures the bees against dampness, are the essentials for good wintering.

He favors providing slight upward ventilation, through a quilt or packing of some kind. He places at least four thicknesses of burlap over the frames, putting the cover on this, and leaving an air space between the cloth and the cover. Never place the cover down tight on the cloth, far better, use no cloth at all, for when the cloth gets damp it does not dry out easily. If there is a space between cloth and hive-cover dampness more easily escapes.

Mr. Sires prepares his bees for winter at the last extracting; or if comb-honey colonies, when removing the last supers. If everything is in normal condition in the brood-chamber at that time, the hive is covered up for the winter. There should be at least 25 pounds of good honey in the hive, 30 or 40 pounds would be better. If the brood-chamber has not enough stores, he removes empty combs and replaces them with combs of honey.

In the locality of North Yakima Mr. Sires believes chaff-hives, or protection to the hive-body, is a needless expense.

#### BEE-KEEPING AT THE STATE COLLEGE.

Prof. A. Melander, the Washington State Entomologist, of Pullman, Washington, addressed the convention, saying the agricultural college would be glad to help the bee-keepers of the state. He desired to know just what they would like the college to do for them. The prospect is that a course in practical bee-keeping will soon be installed, and a thoroughly competent expert employed throughout the year. Prof. Melander captivated the convention with his pleasing manner and evident desire to get in touch with the bee-keepers of Washington.

#### LIQUEFYING HONEY.

Mr. A. G. Kuykendall described his method of liquefying honey, using a tank with steam-pipes running through it. Mr. York also explained in detail the methods and equipments which he used in Chicago, when he bottled some three car-loads of honey during the winter.

Mr. Cissna said he heated his extracted honey and bottled or canned it just as fast as it was extracted. It takes less heat at that time. He thinks that more honey is consumed if sold in the liquid form. He uses a three burner gasoline stove under a jacketed can into which the honey

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is put for heating. Great care must be used not to overheat the honey.

## SELLING CANDIED EXTRACTED HONEY.

Mr. Starkey told his experience in selling candied extracted honey. He used common pasteboard oyster pails and put one pound of honey in each. He rosined the pails, then put the honey in liquid and let it granulate. They were soon all sold out in the grocery stores, and calls came for more. The pasteboard pail can be torn off, leaving the solid chunk or brick of honey, if any prefer it in that way. They retail at 20 cents each. This is a simple way to put extracted honey on the local or home market.

## OTHER PAPERS.

Mr. S. King Clover read an interesting paper on "Weather Conditions Favorable for the Secretion of Nectar in the Bloom".

Two interesting papers were read. One by Mr. C. P. Dadant, Editor of the American Bee Journal, on Educa-

tion in Bee-Keeping and the other by Mr. E. B. Tyrrell, Secretary of the National Association, on Benefits of the National Association to Bee-Keepers.

## OFFICERS ELECTED—BANQUET.

The officers elected for the ensuing year are:

President, Dr. A. E. Burdick of Sunnyside; Vice-president, Lee G. Simmons of Ellensburg; Secretary, J. B. Ramage of North Yakima; Treasurer, Robt. Cissna, of North Yakima.

The banquet occurred at 12:00 noon. It was indeed a "banquet". The wives of the bee-keepers had provided all the good things to eat they could think of, and placed it on tables arranged in the room in the courthouse where the meeting was held. Of all the things to tempt one's palate, those Washington women surely had a great abundance. It was a very enjoyable occasion, and might well be duplicated in many other places where bee-keepers' conventions are held.—GEO. W. YORK, Sandpoint, Idaho.

able resolutions of sympathy be extended to the bereaved families.

We need a new law on bee and brood diseases. Two years ago we secured a very good law through the Legislature, which was forthwith vetoed by Gov. Osborn. We now have a Governor-elect, who, I am quite sure, knows the value of the bee to agriculture and horticulture better than does our present Governor, so we hope for better usage next time. A Legislative Committee of three members was appointed at Saginaw a year ago to hold over until this meeting. We will hear from them later. I hope something tangible will come from this committee, as we are sorely in need of a better law than we now have for the suppression of disease among bees.

Northstar, Mich.

## An Austrian's Impressions of Japanese Bee-Keeping

BY ALEX SCHROEDER.

**M**RS. SCHROEDER and myself crossed the United States this year (1912), coming from Japan, where we passed some most interesting weeks.

On March 23 last, the meeting in Gifu, Japan, of which your number for October, 1912, brought such nice pictures, was held by over 700 Japanese bee-keepers, representing the towns of Wakajama, Hiroshima, Nagasaki, Saga, Ehime, Kagawa, Kanazawa, Aichi, and Miye, and proved a very interesting one. The discussions were animated, and about most important points, as, for instance, the uniformity in dimensions of frames and hives, the necessity of having a better race of bees, etc., proved that the little Japs are progressing also in this branch of agriculture, which the Austrian bee-master, Baron Ehrenfels, called "the Poesie of Agriculture."

We had occasion to visit a prominent bee-keeper, Mr. S. Tamura, of Chiojima, in one of the suburbs of Kyoto, the thousand temple town in Japan, and found him to be quite up-to-date. I beg to enclose a photograph taken in his interesting beeyard on April 1, with a changeable weather between sunshine and snow. Mr. Tamura received us in the Japanese style of extreme politeness, showed us all about his yard and magazine of bee-supplies, which were full of the most exactly-made implements of all kinds and tastes.

His hives are made in the American style. He winters his bees outdoors in double cases, filling the space between the body of the hive and the outer box with rice-bran, and covers the frames with newspapers. He showed me a strong Italian colony containing brood in all stages, and even some beginnings of queen-cells, and provided with lots of sealed honey.

It was a pity that I could not speak Japanese, or that he did not know any

## CONTRIBUTED



## ARTICLES~

### Michigan Prospects

BY E. D. TOWNSEND.

(President's address at the Michigan State Meeting.)

**T**HE season of 1912 was a peculiar one in Michigan. The winter, to begin with, was of more unusual severity upon bees than for several years. The winter was followed by a spring of only ordinary weather for the breeding up of diminutive colonies, the result of a hard winter. Then followed a summer of rainfall. But bee-keepers were more fortunate than some of their brother agriculturists.

We had very good weather during the honey-flow from clover, raspberry and basswood in the latter part of June and the first part of July. The fall flow was a failure, with an abundance of flora at hand, and the weather was so bad that bees could not take advantage of it. The shortage of the fall flow of honey has left many bees in bad shape for winter; for they did not breed up as they usually do in a good season. Many colonies were short of honey for winter stores, and where not fed, may starve before spring. The enterprising bee-keepers, the ones who may expect good returns from their bees another season, have provided them with stores to last them until the honey-flow next June.

It has been said that there is a "silver lining to every cloud." I know that there is a silver lining to the cloud of winter loss, and brood diseases

among our bees, for I see our State nearly free from the "cheap John" 10-cent comb honey so prevalent in past years. These bee-keepers are nearly "off the map," leaving the territory and market for the more enterprising, the leading bee-keepers of the future. The thoroughly posted bee-keeper is not afraid of hard winters, or disease among his bees, for he knows how to eradicate the disease, or refill his hives with bees after a hard winter.

During the year much has been printed about the advisability of producing more comb honey instead of extracted, the comb-honey crop being short. This agitation will likely cause more comb honey to be produced another year, and if one is fitted up for the production of extracted honey I see no reason for an expensive change in apparatus.

Michigan's product is the finest honey in the world, and her intelligent bee-keepers, whether comb or extracted honey be produced, will never have trouble to find a market at the highest price. Michigan's 1912 crop of both comb and extracted honey will all be sold long before the 1913 crop is ready for the market. This is a healthy condition that should be appreciated.

Since our last meeting in Saginaw, a year ago, we have lost two valuable members, Hon. R. L. Taylor, of Lapeer, Mich., and Byron Walker, of Clyde, Ill., who claimed Michigan as his home. The committee which I will appoint later will kindly see that suit-

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of the European languages. So our conversation was not very animated, but still we managed very well. When I declared the bees of the hive open in the photograph were "Italian bees," and the one to the right "Carniolan bees," he was very well satisfied, and to my question, why he had no Japanese bees, he replied, "No good." He showed us also a small house where pictures and illustrations, as well as diplomas and like printed matter, were

to wet ground, winter and summer, since then, and they show no sign of decay.

I do not hesitate to express the opinion that an unpainted cypress hive will never decay. If not painted, the boards may warp, as to that I do not know, but shall another season, as in the spring I shall put some into use. The lumber is heavier than pine, but is easily worked, and being compact holds nails well. I think it the ideal

statements that I cannot accept, and even our ordinary experience points to an opposite conclusion.

What I have to say is chiefly connected with summer ventilation, though it applies also to our winters, where, in most districts of New Zealand, the bees are more or less active all the year around. I have no experience with cellar wintering. Where I differ with Mr. Macdonald, and where I feel sure he is wrong, is in his insistence that upward ventilation is necessary to secure "a warm, dry interior (to the hive), with a supply of fresh, sweet air enveloping the cluster."

Bees often take up their abode in buildings, as Mr. Macdonald says, where there is ample ventilation on all sides, and the same may be said when they build in the open, to the branch of a tree. But this has no bearing on the question of ventilating, where the bees are domiciled in a confined space, this being a different matter altogether.

We cannot get away from the fact that bees endeavor to stop every chink of the hive, except the entrance, with propolis, whether above or at the sides, especially toward winter, and in districts where I have lived among pine trees, where gummy substances were plentiful, the mats or quilts in spring have been so plastered with propolis that it has been difficult to tear them off the frames—the hives were hermetically sealed above the frames. Our friend has labored hard to prove there is upward ventilation in hollow tree-nests and straw skeps after the latter have been propolized. In this connection, I might ask him why the bees propolize straw skeps, mats, and chinks if it is not to stop upward ventilation?

Hollow-tree nests are common in the New Zealand bush, and though I am quite familiar with them, I have never seen one that afforded means of ventilation except by way of the entrance.

In Gleanings in Bee Culture for Oct. 15, 1911, I gave particulars of a series of experiments carried out by a friend of mine (the Rev. J. R. Madan) and myself, in the months of January and February, 1889, in Auckland, N. Z., latitude 37 degrees south. These being our two warmest months, afforded the best period of the year for carrying out such a test, and the results arrived at were very conclusive, so far as we were concerned. Our tests were carried out with a one story and a two story hive. They were continuous, and extended over the best part of the two months. We had as many as 17 thermometers in use at one time, 12 inside of the hive and 5 outside. Each of the 12 was insulated, so far as any contact with the outside air was concerned, as it was possible to make them, and the hive was prepared in such a way that each instrument could be instantly withdrawn for reading without opening it. Readings of each thermometer, both outside and within the hive, were taken about every hour, from very early in the morning until late at night, and noted, together with the direction and force of wind; in fact, both my friend and myself being scientifically inclined as laymen, we endeavored to eliminate all possibility of error.

We used different kinds of mats over



MR. S. TAMURA, OF KIOTO, JAPAN, IN HIS APIARY.  
Italian and Carniolan bees are kept in hives of American style.

exposed in glassed frames, one of them showing the features of "Langstroth;" in another the British Bee Journal of April 1, 1909, containing the picture of Mr. Tamura himself.

After we had been shown all about the yard we were taken into his house, a small Japanese building, where we were treated to tea and sweets, and, on leaving, he presented us with two glasses of his honey.

We were very well satisfied with our call, and glad to have been able to meet a progressive bee-keeper in Japan. Trieste, Austria.

### Cypress or Pine?

BY A. F. BONNEY.

IN THE American Bee Journal for January, page 28, Dr. Miller replies to an inquiry that "my guess would be that pine should have the preference, but I have had no experience with cypress."

The writer, not long ago, read that in the city of New Orleans some cypress water pipes were taken up after lying in the ground for 100 years, and found to be as sound as new wood. The cast-iron plugs which united the log pipes were about rusted away.

I do not doubt this, for cypress logs are now being dug from the swamps of the South to be cut into lumber. I have hives of cypress bought two years ago which have been sitting in damp

lumber for hive stands and bottom-boards, and it may prove to be for hives. Buck Grove, Iowa.

[The above short article was referred to an old carpenter of great experience, who was, in his young days, a builder of sugar mills and plantation homes in the country of cypress, Louisiana. He says that although this wood is a little heavier than pine, with a closer grain, it is very serviceable and durable, does not warp, and has been used largely for shingles and weather boarding, as well as for inside finish. The only possible objection to its use is the matter of price. Good cypress is a high-priced wood in the North. But white pine will soon be still higher priced.—EDITOR.]

### Ventilation of the Hive

BY ISAAC HOPKINS.

HAVING given much attention to the ventilation of hives, and endeavored by a fairly exhaustive series of experiments to find out what part the bees play in it, if any, and the best method of securing the most perfect ventilation, I was much interested in the article on the subject by your able contributor, D. M. Macdonald, in the May, 1912, issue.

There is much in Mr. Macdonald's

## American Bee Journal

the frames, some were very porous, open scrim ("burlap," I think is the American term), some less porous, two or three layers of stout paper, enameled cloth, and several times absolutely hermetically sealed the hive. In all these cases, while the entrance remained the same, there was practically no difference in temperature within the hive. Quoting from one of my notes made at the time, and mentioned in *Gleanings*: "The most notable features are, (1), that the temperature at the top, just under the mat, was always lower than that, 3 inches below; (2), that the lower thermometer (near the bottom-board on one side) was highest until the sun set; and (3), that when the external temperature fell there was always a fall inside the hive."

The difference in the temperature between the upper and middle parts of the hive ranged from 3 to 6 degrees, and on one occasion 8 degrees. The two thermometers, one on each side of the entrance, and projecting inside the hive, always indicated a difference of several degrees. This fact, in conjunction with the results of each phase of our experiments, pointed unmistakably to the conclusion that the bees under all conditions carry out their own ventilation, and that the vitiated air is driven out of one side of the entrance, while fresh air is drawn in at the other.

Mr. Macdonald speaks of the carbonic acid gas given off by the bees, and also of moisture within the hive, both of which must be gotten rid of, with which I quite agree. It would, however, be interesting to learn how our friend arrives at the conclusion that "it may be taken as correct that the consumption by the bees of 24 ounces of honey will produce no less than 18 ounces of water!"

It seems a most extraordinary statement to say that a given quantity of honey will produce 75 percent of water when consumed by bees. When first gathered, nectar rarely contains more than 25 percent of moisture, and usually much less; and as I presume it is the more ripened article the bees consume as a rule, more than 50 percent has to be accounted for, and this amount we could hardly expect to be supplied by the conversion of the other constituents of honey.

Both water and carbonic acid gas are heavier than the atmosphere, though both up to a certain point are suspended in it. Carbonic acid gas is more than half as heavy again as ordinary air, and the average amount in the air is three-tenths of one percent, varying a little in different situations. If the proportion of this gas is greater within the hive, its tendency will be to fall to the lower part, and the same with the moisture; hence, I take it, the reason why the bees find it necessary to ventilate downwards, and through the entrances, rather than upward.

Another experience, mentioned in *Gleanings*, is very convincing to me. In my early days of bee-keeping, 40 years ago, when porous mats and contracted entrances in winter were advocated, I, of course, followed the gen-

eral rule, and as a result had plenty of moldy combs to deal with in spring when first opening up the hives, and also mild cases of dysentery through soured food. Later on, I concluded that the need of some better system of ventilation was the cause of the trouble, but it was not until the experiments mentioned were carried out that I became thoroughly convinced that the general idea of upward ventilation was wrong—I have never had a moldy comb since.

To facilitate perfect ventilation as indicated and carried out by the bees, a liberal entrance must always be provided both in summer and winter, and this I have advocated and adopted myself ever since with perfect satisfaction.

Auckland, New Zealand.

### European Foul Brood

BY EUGENE BAKER.

**M**Y EXPERIENCE with this disease has not made me a convert to the generally accepted theory that Italian bees, and especially golden Italians, were most immune.

In the spring of 1911, my apiary, located near Duarte (views of which accompany this article), contained 64 colonies. Ten had golden Italian queens, three leather colored, and one an Albino; all from a prominent eastern breeder the previous autumn. Those in the remaining colonies were descendants of Italian queens purchased at different times in the East, few of them being purely mated.

Until two years ago European foul brood was unknown in southern California. Although a subscriber to all three bee journals for years, I always skipped the articles on foul brood, and consequently very readily diagnosed the disease as chilled brood. It was not until a neighboring bee-keeper,

Mr. Blair, sent a frame to Washington and received the assurance that it was the genuine European foul brood, that I knew what was the matter.

It was then late in the season, and in the meantime I had lost nearly half of my colonies. I at once sent for our inspector, Mr. George De Sellem, and he found all the remaining colonies affected. He later found the disease in every apiary he visited in my vicinity. Strange to say, the golden Italians had been the first to succumb, then the leather colored, and as far as I could judge there were only two colonies left that had pure Italian queens and they were badly diseased.

While Mr. De Sellem is an expert with American foul brood, at that time he had had practically no experience with European, and was undecided whether to treat them at once or leave them until spring. We finally decided to treat some of them at once by the Alexander plan, and he helped me find and kill the queens in 24 of them, which I later requeened with Carniolans purchased from Mr. B. B. Hogaboom. Twenty-one queens were successfully introduced, and all the colonies had plenty of stores for the winter.

When I examined the bees last spring I found every colony having a Carniolan queen in fine condition and perfectly healthy, and all of them have remained so. Every other colony was badly diseased, and only 32 colonies left, all told.

In the same yard were about 60 colonies, owned by Mr. Bliss, from whom I leased the ground. They were all more or less diseased the previous season, and had not been treated at all. He requested me to care for them, as he was too busy. I found nearly half of them dead, and the combs destroyed by moth worms. By uniting I formed 20 pretty fair colonies, which, in connection with my own, I treated at the beginning of the flow by placing the



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queen in a clean hive containing empty combs, or combs with honey but no brood, and the brood above an excluder, removing the most affected combs. In every case where the colony was strong the combs were cleaned out and filled with honey, the new brood below being healthy. In the weaker ones it was necessary to repeat the treatment and requeen with Carniolans.

By way of experiment, one Italian colony, which had failed to respond to the above treatment twice, was requeened on Aug. 18—nothing being done but to remove the Italian

careless visitor and robbed out, with no bad results.

The Carniolans are hustlers, non-propolizers, gentle, and, handled in the same manner, I have not found their swarming propensity more developed than in any other bees. I am very much pleased with them so far, and inclined to adopt them exclusively.

Mr. Blair found many of his Italian colonies re-infected this spring, and after satisfying himself that my Carniolans came through perfectly healthy, he requeened most of them with Carniolans, and he recently told me that he thought all of his bees were free from the disease, and that if he had requeened with Carniolans instead of Italians last year, he would have had more bees and more honey this year. He has over 100 colonies. Two years ago he had 216.

Los Angeles, Calif.



APIARY OF EUGENE BAKER. DUARTE, CALIF.

and introduce the Carniolan immediately. This colony was the only one in the apiary having the disease at that time. On Sept. 30 I examined it, and to my surprise, every cell was clean, the new brood being as fine as you would wish to see. Why the old bees should do for the Carniolan what they



APIARY IN SOUTHERN CALIFORNIA WHERE CARNIOLAN BEES ARE PREFERRED TO ITALIANS.

failed to do for their own queen is beyond my comprehension.

I am led to believe that European foul brood is not carried in the honey, from the fact that a stack of seven 10-frame hives containing honey and diseased brood taken from colonies for rendering, was left uncovered by some

## Some Observations Concerning Comb vs. Extracted Honey

BY B. KEEP.

**T**HE question of comb vs. extracted honey can never be decided in favor of either to the exclusion of the other, each has its proper sphere, and always will have. But comb honey, by reason of the form in which it reaches the table (in a small package), and the manner in which it is eaten, stands as a luxury. Only a very moderate quantity can be eaten by each individual—a little suffices to satisfy, and the cost is more or less suggested by the gingerly small portions served to each person.

There is, on the contrary, an unlimited field for extracted honey. It is unnecessary to try to state all its possibilities. I am not discussing the production of either form of honey; that is a question for each producer to decide for himself.

The demand for comb honey being, as outlined above, self-limited, it remains for the honey men, both producer and dealer, to educate the people in the use and the possibilities of liquid honey. When purchased in pint, quart, half gallon and gallon quantities, honey does not fall under the head of luxuries, although it may not be considered a necessity. When purchased in those quantities the cost of each spoonful is not in evidence, and when a person once becomes acquainted with the many delicious combinations possible in consuming it, there is but little desire for wax with it.

Comb honey will always have a demand to be met, but from the nature of things no great increase can be expected. Comb honey is a luxury. Extracted (or liquid) honey is not a luxury. Will it not then be advisable to concentrate efforts to popularize and increase the demand for honey upon the cheaper, more plentiful, and more convenient liquid honey? This is not a reflection upon comb honey,

but rather a suggestion of the most promising direction of the market for honey, either kind of which any beekeeper can produce, as he may see the demand and his locality may permit.

Lyndhurst, N. J.

## Eight and Ten Frame Hives

BY DR. C. C. MILLER.

**O**N PAGE 16, there seems to be a difference of opinion between J. J. Wilder and ye editor. Each is entirely right—from his point of view. Editor Dadant says, "Properly made hives should have the same space, *per frame*, whether they are 12-frame hives or 6-frame." Aye, "should have," but they don't have; at least 8-frame hives and 10-frame don't. And however clear that may have been in Editor Dadant's mind, the importance of the matter is sufficient warrant to go into it a little more fully.

The inside width of an 8-frame hive is  $12\frac{1}{4}$  inches. With frames spaced  $1\frac{1}{2}$  inches from center to center,  $2\frac{3}{4}$  inches must be added to the width to make it accommodate two more frames. That would make the width of a 10-frame hive  $14\frac{1}{4}$  inches. Instead of that, the width of 10-frame hive is  $14\frac{1}{4}$  inches! To put it in other words, to accommodate the two additional frames requiring  $2\frac{3}{4}$  inches, only  $2\frac{1}{4}$  inches are added. A shortage of  $\frac{1}{2}$  of an inch.

In an 8-frame hive, the 8 self-spacing frames take 11 inches, leaving a space of  $1\frac{1}{2}$  inches. That leaves plenty of room for a dummy at one side. With the removal of the dummy, the taking out of the first frame, or indeed of any frame, is an easy matter. If worst comes to worst, so much glue having accumulated as to make it troublesome to get out the dummy, the dummy may be omitted entirely. Yet that has not been found necessary by the writer during all the years since these hives were first introduced, although there are some who prefer to omit the dummy from the start, allowing a liberal space at each side of the hive. So it comes to pass that taking the frames out of an 8-frame hive can never become a very difficult matter.

In a 10-frame hive, the 10 self-spacing frames take  $13\frac{1}{4}$  inches. That leaves a space of  $\frac{1}{2}$  inch, or  $\frac{1}{4}$  inch at each side. The frames may be all crowded to one side, and with the  $\frac{1}{2}$ -inch space left at one side, it seems there ought to be plenty of room to take out the first frame. But that  $\frac{1}{2}$  inch is not a constant factor for glue constantly crowds the frames a little farther apart, making the side-space so small that getting out the first frame becomes a matter so difficult that Mr. Wilder well says he prefers to use 8-frame hives.

The question arises: Why is room for a dummy allowed in the 8-frame hive and not in the 10-frame? Like enough the craze for economy of material suggested in the first place that a 10-frame hive might do with no dummy

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and  $\frac{1}{2}$ -inch space. But whoever has tried, side by side, 8-frame and 10-frame hives, has no doubt concluded that after there has been some accumulation of propolis, the space in the 10-frame hive will not do as compared with the 8-frame.

More important than the question as to the origin of the limited space in the 10-frame hive is the question why this handicap has continued upon it all these years. If the extra space is a good thing for the 8-frame hive, it is an equally good thing for the 10-frame. If the 10-frame is just as well without the extra space, so is the 8-frame. Is there a ghost of a reason why the two should be different? In other words, why there should not be, as Editor Dant says, the same space *per frame* in each hive? Perhaps the answer will be that there are thousands of hives of that particular size already in existence, with covers and other parts to correspond, and it would make confusion to introduce a size just a little different. But that argument hardly appeals to the bee-keeper, especially to the beginner, however strongly it may appeal to the manufacturer. In fact, to the practical bee-keeper it appears little less than an outrage that this wrong, this handicap upon the 10-frame hive should be continued year after year.

The trouble is that the beginner does not know, while his hives are new, the trouble in store for him, and after he has learned about it he has so many hives on hand that he quietly submits rather than to have two sizes in the same apiary. Before he has stocked up to any considerable extent with hives measuring  $14\frac{1}{4}$  inches, inside measure, he will do well to demand  $14\frac{1}{4}$ . Even if he has to pay a little more for the unusual size, it will be money well spent. Let the 10-frame hive have just as fair a chance as the 8-frame.

Marengo, Ill.

[We have also a letter from A. C. Miller, of Providence, R. I., calling attention to the fact that the manufacturers make the 10-frame hive smaller, per frame, than the 8-frame. The trouble with me is that I have been using a 10-frame hive which has the regular one-and-one-half inches for each frame, and have never given thought to any other. There is a difference between what *is* and what *ought to be*. Below is A. C. Miller's letter.—EDITOR.]

In the January issue, page 16, in a foot-note to Mr. Wilder's comments on 8 and 10 frame hives, you say, "Properly made hives should have the same space *per frame*," etc.

In good old times 10-frame hives were 20 inches long by  $16\frac{1}{4}$  wide, outside, but about 20 or more years ago the supply men made even figures, and all hives were made 20x16 inches. That lost quarter of an inch is as troublesome as an extra inch on a man's nose, and is at the bottom of such trouble as Mr. Wilder refers to. Last year, I understand the manufacturers went back

to the  $16\frac{1}{4}$ -inch width. It will make nice fun for those who use covers like the "Colorado" and "Metal Topped" fitted to the 16-inch width.

There will be a loud noise by and by.

### The 12-Frame Langstroth Hive

BY R. F. HOLTERMANN.

THE report of Mr. Greiner, pages 56 and 57, in connection with the New York State convention, interests me. The wedges which I use, mentioned by Mr. Greiner, are kept in place by driving a tack through the thin end, the point of the tack going through the wedge, and when inserted, this tack sticks to the bottom-board or brood-chamber.

In the last lot of hives I have made, the wedge idea is embodied in the hive side. I had to learn that the space under the combs did no harm after the close of the honey-flow.

The third line from the bottom of the third column, page 57, states that I use 8 frames in the 10-frame space in the supers. I may have said what I did not mean. It should be that I use 10 frames in the 12-frame super space. I value the 12-frame hive to such an extent that when I buy bees in the 10-frame hives, I take out the combs and put them into the 12-frame brood-chamber, waiting an opportunity to sell the former. Let no one get the impression that I use a Langstroth hive less than 12 frames.

The bees appear to be wintering well here. They had a cleansing flight late in December, and at present it looks as if bees would come through much better than a year ago; however, it might yet prove to be a very late spring and bees might suffer.

Brantford, Canada.

### The Name of Spanish-Needles

BY JOHN H. LOVELL.

IN THE American Bee Journal for December, attention is called in an editorial to Spanish-needles, a most valuable honey-plant of the Mississippi Valley. Further information in regard to the Latin and English names of this plant, it is added, will be given later. This species, in the lowlands of the Mississippi River, covers large areas, and when it blooms in September the golden-yellow rays present a most brilliant display of color. The flowers secrete nectar in great abundance, which yields a golden honey of great excellence and popularity.

Late in the fall of 1912, Mr. Dadant gathered specimens of the fruit of this species, and of another taller plant belonging to the same genus and growing in the same situation. The latter species has small rays, and it is not at all conspicuous. The plants had long been out of bloom, and there would seem to have been little but dead material to collect. These dried speci-

mens were sent to me through Mr. E. R. Root for determination.

The identification of the shorter species, or the plant so valuable to beekeepers as a source of honey was undertaken first. The material consisted chiefly of achenes (the so-called seeds) and involucre bracts. After a careful examination of all the characters available, the plant was referred to *Bidens aristosa* (Michx.) Britton. In one particular, however, it differed from the 7th edition of Gray's Manual, the awns were downwardly instead of upwardly barbed; but, according to the Illustrated Flora of Britton and Brown, both forms occur.

Under these circumstances it seemed desirable to have my determination verified by an acknowledged authority. At the Gray Herbarium of Harvard University, there is ample material of all the species of *Bidens* for comparison. Accordingly I sent part of the fruit to Prof. M. L. Fernald, who is a joint author with Dr. B. L. Robinson, of the 7th edition of Gray's Manual, and one of the first authorities on the American flora, stating that I had identified the species as *Bidens aristosa*.

A few days ago I received a letter from Prof. Fernald, in which he says:

"The fruit you sent was recognized as that of an anomalous variation of *Bidens aristosa*, in which the barbs of the awns are retrorse instead of ascending. I have several times started to look into the matter, and have been as often interrupted, so that today, for the first time, I have actually got down to the question and followed it through. For the present the plant had better pass as *Bidens aristosa*. In its awns it shows a distinct departure from that species, but not in its other characters. We have considerable material from Illinois and Missouri, and it seems to be so abundant that I shall soon publish it as a variety."

The species is, therefore, undoubtedly *Bidens aristosa*, under which name it should pass until it has been described as a variety by Prof. Fernald, when the varietal name should be added.

As to the English name Spanish-needles, in view of the fact that there is another species of *Bidens* (*B. bipinnata*), which is also called Spanish-needles, it would no doubt be better to give the honey-plant another name. But this is easier said than done. We understand that in the region of the Mississippi Valley it is generally called Spanish-needles. If we change the name on paper, the farmers and beekeepers will still continue to call it by its old name.

But to what name could we change it? Gray's Manual gives no common or vernacular name for *Bidens aristosa*, while Britton and Brown call it tickseed sunflower, which is no better than Spanish-needles. It frequently happens, indeed, that several different species have the same common name. In this very genus of *Bidens* several species are called beggar-ticks, while a

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variety of plants pass under the name of thistle and sunflower.

It seems better, therefore, to retain the name Spanish-needles, but to prefix to it some adjective, such as showy or yellow, to distinguish it from the other Spanish-needles (*Bidens bipinnata*), which has small heads with the rays short or none. We suggest that the honey-plant (*Bidens aristosa*) be called large-flowered Spanish-needles, and that *bidens bipinnata* be called small-flowered Spanish-needles. This will permit the name to be retained, and yet prevent confusion.

The tall species of *Bidens* gathered by Mr. Dadant, and sent to me is *B. frondosa* L. The flowers are inconspicuous because the rays are small or absent. This is a very common and widely distributed species, extending throughout the eastern United States, and from Florida to Texas in the south, to Nebraska in the Central States, and northward to British Columbia. Some of the common names of this plant are beggar-ticks, stickseed, beggar-lice, and pitchforks.

No specimens of *Bidens bipinnata* were received, and this may not occur at Hamilton, Ill. It is not found in Maine, and is not given in the list of the plants of Vermont. It extends southward from Rhode Island to Mexico and tropical America. It may be distinguished by the following characters: The long achenes are angled, usually 4-awned, the awns very unequal, downwardly barbed, the barbs rather coarse.

Waldoboro, Maine.

## Sacbrood

BY MORLEY PETTIT.

**I** HAVE just read your editorial on page 41 of the American Bee Journal about dead brood. I can also say that I never saw any of this before starting inspecting, and attribute this to the fact that we were always careful to keep our colonies up in good shape at home. On inspection work I have found a great deal of this dead brood, which is neither of the varieties of foul brood. It has just been described by a bulletin from the Department at Washington, as being of a slightly infectious nature, although the bacterial cause has so far not been isolated. It has been named sacbrood. (See page 47.—Editor.)

I have found it mostly in colonies of black bees, where no new queens had been introduced for a number of years, and the stock was run out.

As to bee terms (page 42), I am Irish enough to have adopted the term "beekeeper" without the hyphen before I ever knew that Editor Digges was doing this. I never took the trouble to look it up in the dictionary, but decided it was the best way to spell the word, and after considerable struggle with proof-readers in getting out my mailing matter, have succeeded in having the term used in all publications and bulletins from this Department.

You ask, "Has honey advanced with

other food products in prices?" I claim that it has not, even in Ontario where the price has advanced 5 cents per pound since the Crop Report Committee started operations about 10 years ago. It is simply wonderful the amount of work that can be done by judicious advertising and holding together on the part of the bee-keepers.

Guelph, Canada.

## Reminiscences of Smoking Bees

BY G. C. GREINER.

**M**Y EARLIEST recollections on the above subject date back to the spring of 1876. During the preceding fall and winter we had manufactured and sold to the surrounding bee-keepers within a radius of six or eight miles between 175 and 200 hives. Nearly all of these bee-keeping friends were farmers, keeping anywhere from 1 to 20 colonies in the old style box hives. For a stipulated fee, we had also agreed to transfer all these bees into our new hives as soon as the season would admit.

To the experienced bee-keeper, the fulfillment of these contracts would have been an enjoyable season's work, but with the exception of a few primitive hints by a bee-keeping friend, we knew nothing about bees, had never seen the inside of a hive filled with bees and depended wholly upon our prospective experience for our bee education. Although we had a little inkling that bees could be managed with smoke, the existence of a bee-smoker made especially for this purpose, was unknown to us, and when we started on our transferring expedition, we expected that a couple of little briar-pipes would furnish us this quieting medium. We were sadly mistaken. Before we had transferred many colonies, we had found by sorrowful experience, that smoking to excess, as was necessary to keep bees under control, was not the most enjoyable part of our new venture; it made us deathly sick. The only way to remain master of the situation was to use a little strategy. We would slyly up to a hive, close its flyholes and other existing openings with rags, grass or anything handy, set the hive on the ground bottomside up, and before the bees had time to realize what had happened, would cover the opening with our driving box. This driving box was provided with a rim two or three inches wide, and fitted any common box hive in use.

When this stage of the operation was reached without mishap, we generally had the control. After drumming against the hive ten or fifteen minutes, or until the bees had filled themselves with honey and had entered the driving box, we would place the latter on the old stand to catch the flying bees, and carry the hive a little to one side, generally in the shade of

some trees after which the remaining part of the job would be fair sailing.

All in all, our season's work proved satisfactory beyond our expectations, and with the exception of a few incidents of an amusing nature, nothing of great importance transpired. But the details of some of these little happenings were so impressive, that even now, after thirty-six years have passed, I can recall them as vividly as yesterday's transactions.

One of our customers, living in the suburbs of our village, owned a row of some 18 or 20 colonies, as nearly as I can recollect, which occupied a long continuous platform near to and facing his neighbor's fence. The hives were placed close, with hardly room enough between to allow removing one without touching another. The bees were, as all the rest in this locality, of the common black German strain, and this particular lot proved to be, as we afterward had occasion to observe the most ferocious fighters we had ever encountered.

We began the job early in the morning, before many of the bees were flying, and by the application of our usual tactics succeeded quite well in transferring the first two or three swarms. But with the rising sun, bees grew livelier. The disturbance at the bench, careful as we tried to be, was felt all along the line, and soon some of the more inquisitive occupants of the hives were buzzing around our heads. It wasn't very long before—bing—one had objected in a very impressive way to our invasion; pretty soon another followed suit, and still another left its mark, and in less time than it takes to tell it they were giving it to us right and left. Even shirt sleeves and pantaloons were of no account, and they seemed to find sensitive places almost anywhere. To remain there would have been premeditated suicide, and an unconditional flight, that landed us behind the closed doors of a nearby shop, was our only salvation. Although this place of refuge was a grimy, dirty blacksmith shop it seemed to be the most comfortable place on earth, for everytime we opened the door to ascertain the prospects, a few sharp reminders from watching sentinels would convince us that they still held the fort.

For a time terror reigned supreme. The owner of the bees, who had been with us during our early manipulations, admiring our skill and heroism, had sought shelter in his woodshed long before the real fun commenced. Neighbors, too, who had come to the fence to witness the great feat of transferring bees from one hive to another, had found it advisable to take an unceremonious departure at an early stage of the fracas, and even cats and dogs had to fly for the cat-hole.

Just as we were meditating on the probabilities of a life sentence, deliv-

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erance in the shape of a tremendous cloud of smoke appeared from the direction of the woodshed door. The proprietor of the ranch, taking pity on our helpless condition, had put some live coals into a large tin pan and onto these a quantity of woodpile accumulations, which sent up a column of smoke that compared favorably to the puffings of an express locomotive. Holding this pan in front of himself, it had a magical effect on the bees. They did not offer to molest him on his way to the shop, and when he opened the shop door in a triumphant way, he said: "There, take this pan and blow the smoke against the hives, that will fix the devils."

Our friends' advice proved literally true. After allowing the infuriated bees a reasonable time to quiet a little, and replenishing the smoke producing pan with a liberal supply of fuel from the woodpile, we were enabled to resume our work. In due time we finished the job with no trouble to speak of.

Only a short time ago a bee-keeping friend, to whom I related the incident, remarked, after we had a good laugh over it: "Why don't you write it up for the bee-paper?" And here it is.

A little later another of our customers had a similar surprise in store for us. On a previous visit we had discussed the benefits and advantages derived from the use of a properly constructed bee-smoker. Being somewhat of an inventive genius, he had fastened over the valve of a common hand-bellows, such as were used in

those days with the old-fashioned charcoal flat irons, a tin can with perforated top and bottom. This latter he filled partly with rotten wood and finished with live coals from the stove. In opening the bellows the suction would draw the smoke inside and closing it would send the smoke out of the nozzle. With the exception of the disadvantage that it required both hands to work it, our friend's contrivance would have been quite a formidable bee-smoker, if moderately used. But when we called there at this time, he was so enthusiastic over his invention and so eager to demonstrate its efficiency that he not only blew the poor bees of an opened hive off the frames and over the edge of the hive, but half way across the yard. LaSalle, N. Y.

[Similar troubles to friend Greiner's have been the lot of many of the older bee-keepers. The ancient smoker which he describes was the only kind used anywhere until 1873, when Moses Quinby made the first bellows smoker that could be used with only one hand. Very few of our younger men can have an idea of the difficulties encountered by the older heads before the advent of practical bee-smokers and of comb foundation. We have often blown smoke upon the bees until we were dizzy with the work.

Friend Greiner's articles bear the stamp of experience, and are always welcome.—EDITOR.]

5. I never knew of any one who thought it paid to requeen twice a year.

6. You will find addresses of queen-breeders in the advertising columns; but I don't suppose one would be more adapted than another for any particular part of any State.

7. I'm not sure whether any one says so in so many words, but practically every queen is so ensured, for no honest man would send out disease with a queen and say nothing about it. And yet I suppose it might happen that disease would be thus carried sometimes without the sender being aware of it. The present tendency to make queen-candy with boiled honey, or with no honey at all, tends toward safeguarding against disease.



CHARLES CHANDLER AND PART OF HIS 100-COLONY APIARY AT EMPORIA, KAN.

## DR. MILLER'S ANSWERS

Send Questions either to the office of the American Bee Journal or direct to  
DR. C. C. MILLER, MARENGO, ILL.  
He does NOT answer bee-keeping questions by mail.

### Queen-Excluders—Requeening

1. Will bees store as much honey by using a honey-board in an 8-frame hive? I have trouble by the queen going into the upper story.
2. What kind of a honey-board would you recommend?
3. Would it be necessary to use a honey-board on a 10-frame dovetailed hive?
4. We have a spring and fall honey-flow here. The queens quit laying before the fall flow, and do not begin in time to rear enough young bees to winter. Would requeening help this?
5. Would it be best to requeen twice a year; also what time of the year?
6. Please give me the address of a golden Italian queen-breeder that would be adapted for this part of Indiana, and who has no disease in his apiary?
7. Does any queen-breeder ensure his queens free from disease; if so, in what way?

ANSWERS.—1. I suppose you have reference to a queen-excluder. You will probably not be able to see any difference in the

amount stored with or without an excluder if indeed there is any difference at all.

2. There is probably nothing better than the wood-zinc excluder. But if you are working for section honey you will find it not worth while to use an excluder, provided you use full sheets of foundation in sections. If you use small starters of foundation it will be better to use an excluder.

3. In this respect there is little difference between an 8-frame and a 10-frame hive, although the queen will probably be more inclined to enter the super over the smaller hive.

4. I wonder now whether you are not theorizing just a bit. If there is a fall flow enough to be called a flow, or enough for the bees to store any surplus from it, it's about a sure thing that it will start the queen to laying, so as to secure a crop of young bees for winter. Yes, it is easier to start a young queen to laying than an old one.

### Bees on the Hill or in the Valley

I have 7 colonies of bees located in a valley, and a neighbor bee-keeper has his bees on a high hill, perhaps 175 feet higher than mine. He says my bees have the advantage of his, as my bees go up hill empty and down hill loaded, while with his it is just the other way.

That is all right, and true as long as my bees go west or north, but when they go east they would have to go up first and then down on the other side, and I notice that they don't go very far that way. Now if I would place my bees on top of this hill I think they would go farther south and east than they do now. Most of the basswood is on the hillside, but the best clover is in the lowlands. Do you think it would pay to move my bees higher up for this reason?

IOWA.

ANSWER.—It surely must be easier for a bee or anybody else to carry a load down hill than up. In actual practice I have some doubt whether the difference is enough so that a colony in the lower location would show a distinctly larger yield than one higher up. But the matter of distance may be a much more important factor. Within a distance of perhaps a mile and a half it is doubtful that distance counts for much. Be-

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yond that—possibly I should say beyond two miles—distance counts for a good deal, and if your source of supply is beyond that there would no doubt be a gain to move the bees accordingly.

## Splints—European Foul Brood

1. Are those splints used by Dr. Miller for foundation supports manufactured by some concern; if so, where can I get them?  
2. If caging a queen for a certain length of time, in case of European foul brood, stops the disease, should the disease not come to an end in fall, as all brood-rearing stops entirely for several months?

If an apiary has foul brood one season, will it be free from it next year? There are no young diseased larvæ from which the nurse bees can suck the juice and feed it to healthy ones the next spring. INDIANA.

ANSWERS.—1. The A. I. Root Company make them, and I think also the G. B. Lewis Company—possibly others.

2. The shortest answer to your question would be to say I don't know. And that's

expect that the disease would begin rather slowly from these. And observation confirms that supposition. In a colony which has not been badly diseased in the previous year, the first examination in the following spring shows very little disease—possibly none. Subsequent examinations will show it on the increase, although if I am not mistaken there are some cases in which a colony will remain healthy which has been slightly diseased the previous year. If a colony has been very badly diseased this year, next year you may look for it to start in at the very start with plenty of diseased larvæ, probably because of the millions of spores that are present.

Now, if there is anything that still puzzles you, if you will tell me what it is I'll help with an explanation—if I can.

## 8-Frame vs. 10-Frame Hives—Special Locality

1. In a locality where there is a very small fall honey flow, but enough in the spring for

building up of a colony, with the possibility of interfering a great deal in case there is some hitch in introducing. If your are requeening for the sake of having better stock to breed from, it may pay to do so early, even if it interferes greatly with the honey crop. But in your case you hardly want to interfere with the crop of this season. So, perhaps you will do just as well to leave the old queens until after swarming, at least, if not until near the close of harvest.

## Bee-Bread in Honey

1. Can you see bee-bread in extracted honey?  
2. How does it act when melted?  
3. What makes honey form a yeast-like top when heated? I have had some honey do this. Is it bee-bread? I am told it is. CALIFORNIA.

ANSWERS.—1. Ordinarily, no. That is, you cannot see it with the naked eye, although in all honey, comb or extracted, I suppose some pollen can be seen, if a proper magnifying glass be used.

2. I don't think you can melt bee-bread.

3. I suppose it is effervescence, occurring more readily the thinner the honey is, and pollen may help in the process.

## Bees in Box-Hives—No Honey Nor Swarms

1. I have a nice lot of bees, but they are all in the old-fashioned box gums. During the honey harvest I raise them  $\frac{1}{2}$  inch all around. Then I let them down in the fall and daub them up, only leaving room for a few bees to pass at a time. I fear that they do not get enough air. Do you think I could make an opening on the opposite side and give them plenty of air?

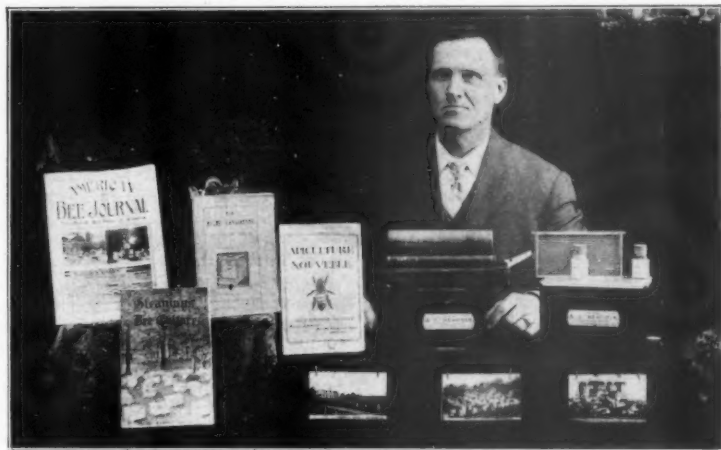
2. One colony keeps carrying out dead bees. What is the cause of this? Is it because they don't get air enough? or do they die of old age? I love my bees, and have had good luck with them. I have not lost a colony in seven years. I am afraid I will lose two this winter.

3. What is the reason my bees do not swarm? I have not had any swarms in four years. They are always rich and very strong in the early spring. I am going to buy some up-to-date hives this winter for next spring, so I can increase them. I will make them swarm. WEST VIRGINIA.

ANSWERS.—1. It is not easy to say whether your bees have enough air or not. You say you let down the hives in the fall and then daub them up (the entrances I suppose), and "only leave room for a few bees to pass at a time." The question is whether that "few bees" means 3 bees, 20 bees, or more. I would rather suppose it to mean not more than half a dozen bees, and that might mean an entrance of not more than half a square inch. I should say that was quite too small an entrance. But you say you have not lost a colony in seven years; and with such success it can hardly be that the entrance is so small. At any rate, so long as you winter perfectly it would hardly seem the entrance can be much at fault. But if the entrance is less than the equivalent of about 2 square inches, it will be easy to increase the amount of air by making a hole as you suggest at the bottom of the hive at the opposite side, although the usual way would be to make the entrance at the front larger.

2. It is not likely that lack of air makes the bees carry out their dead. A good many bees will be dying off all the time from old age, especially will this appear more prominent if breeding stopped early.

3. I don't know why your bees don't swarm. Most bee-keepers would be de-



A. L. Beaudin, of St. Chrysostome, Canada, with photograph of bee-journals and bee-books; his home and apiary, and a feeder of his own invention.

the truth. I don't know why caging a queen should stop the disease. If caging a queen stops the disease, I don't know why the winter's rest from brood-rearing does not stop it. But here is the important fact that I do know. I know that in a large number of cases cessation of brood-rearing for a week or so has stopped the disease. Note that I don't say in all cases, but in the large majority of cases. I don't know that in the great majority of cases the disease is conveyed from one cell to another by the nurse-bees sucking the juices of recently diseased larvæ. That's only a theory, but it is a pretty satisfactory theory until a better theory is advanced.

I think, however, that no one has advanced the theory that the disease is in all cases conveyed by means of larvæ that have been dead only a short time. It may in some cases be conveyed through spores in dried-up scales of larvæ that have been dead a long time. But I suppose these last cases are exceptional. Now, although I don't know all about it, if you will allow me to theorize, I'll tell you what I think is possible in the case you mention. In early spring or winter, when brood-rearing begins, there are no diseased larvæ present. But there are dried scales containing spores. One would

them to begin storing a surplus by March 1, which is kept up until the last of June, do you think the 8 or 10 frame hive would be better? They are managed for comb honey.

2. In such a case do you think 8-frame colonies would store surplus sooner, and if so do you think the 10-frame colonies would catch up later on? CALIFORNIA.

ANSWERS.—1. I would chance the larger hive.

2. On the face of it, it might seem that the 8-frame hive would have its brood-chamber filled sooner, and so surplus would sooner be stored. In actual practice you will be likely to find out that it doesn't pan out that way. A good way will be for you to try both kinds side by side; or if you have 10-frame hives you could reduce some of them to 8-frames by the use of dummies.

## Requeening Early in the Season

I have lately bought 16 colonies of black bees. They went into the cellar on Dec. 12 strong in bees and plenty of good, sealed stores. They are in fine condition at this date, but as the hives are of all sizes and shapes, good for nothing but kindling wood, I shall transfer to my dovetailed hives.

Do you think it would pay me to requeen them with good Italian stock early in the season? WISCONSIN.

ANSWER.—Requeening early in the season is sure to interfere at least a little with the

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lighted to have as little swarming as possible. There is a difference in the bees themselves as to swarming, and it may be that you are so fortunate as to have a strain of bees little inclined to swarming. It may be that your hives are such as to allow the queens great abundance of room, in which case there would be little swarming. There may be some other reason that I don't know.

## Bee-Keeping in Newfoundland

I wish to try bee-keeping here, and would like to know what kind of bees would be most suitable for this climate. At present there are none in Newfoundland (save the wild bumble-bees). We have plenty of sunny, hot weather in summer, when they would do all right, but our winters are rather long. Still, I believe I could manage them all right, as I can house them during the winter.

NEWFOUNDLAND.

ANSWER.—I wonder if you may not be mistaken about there being no bee-hives in Newfoundland. I don't know anything about it, only it would be very strange if no one had introduced them before this. Anyway you are to be congratulated if there are none near you, even if they may be farther away. As there are none within a few miles you will be able to keep pure stock, at least for a time. You can hardly go amiss to get Italians, preferably the leather-colored, as the darker ones are called.

Bees are kept successfully in colder climes than yours. The severe winters ought to cut no figure, for cellaring offers the way out.

It is to be hoped we shall hear from you after you get started.

## A Winter and Summer Bee-House

I have in a convenient place a house 5 feet wide by 12 feet long. I can put a hive at each end, two on one long side, and one on the other long side (5 hives in all), leaving room for a door on the side where I put only one hive. I would put the alighting-board on the outside for each hive, and cut a notch something like  $\frac{1}{2} \times 10$  inches for each entrance. How would they do in the summer? Would they gather as much honey as they would placed on separate stands? What has been your experience in bee-houses vs. placing hives on separate stands?

KENTUCKY.

ANSWER.—I have had no personal experience with houses such as you propose. Years ago there was much said in their favor, and quite a number were in use. The greater number of those who had them, however, gradually gave them up, if I am not mistaken, although a few still think well of them. On the face of it, it looks as if it should be just the thing for winter, but I think the general verdict was against such houses for wintering. For summer there is the objection that the bees are not so promptly induced to fly out as they are where there is a better chance for the sun's rays to enter the hives. Yet in actual practice you will not find much difference.

## Old and Young Worker-Bees as Drone-Layers

Do old bees become drone-layers, or do only the younger ones "go astray"?

NEW JERSEY.

ANSWER.—I don't know. But I have a strong impression it's only the younger ones. Some have advanced the theory that laying workers, in their larval existence, have been located near queen-cells, and so have been fed some of the royal jelly as a sort of overflow. If that were the true theory, of course there would be no drone-layers except those which started in at the business early in life. But I wouldn't take much stock in that theory. Nurse-bees are not so careless as to slop around the soup-dishes in that sort

of style. Besides, if that theory were correct, laying workers would be just as likely to appear at all times after young queens are reared, whereas we know that with most races of bees no laying workers are reared unless a colony has been hopelessly queenless for some time. I don't remember that I ever saw any other explanation given, but if you can't find anything better I'll offer one of my own for what it is worth. It is that when a lot of nurses are loaded up with pap, and only a few larvae are left unsealed, these few are fed so heavily that they are developed sufficiently to do something in the egg-laying line. If any reliance can be put upon this theory it is still true that no bee could start in as a laying worker after it becomes old.

## Moving Bees by Wagon and Rail—Spreading Brood—Spring Work

I contemplate moving soon, and wish some advise about preparing my bees for the trip. Will have 40 miles of very rough mountain road, then on the train for 50 miles. Bees in modern hives and light in stores.

1. Will I need any packing over and under the frames to keep them solid enough?

2. Will they need more ventilation than the usual entrance?

3. How can one tell when bees need additional ventilation when in transit?

4. I wish to rear queens as soon as practicable in the spring. How can I tell when the proper time comes?

5. How warm should it be by the thermometer when it is safe to handle brood in ordinary manipulation?

6. What are the indications when it is safe and profitable to spread the brood, i. e., place an empty comb in the center?

7. When a 10-frame hive is full of brood, and the harvest 30 days off, is it best to add another brood-chamber above or strengthen the weak colonies?

8. How about it if the harvest is just at hand?

9. How can a person who has contracted the "bee-fever" expect to come out alive if he does not get a good bee journal?

Your answers to questions have helped me wonderfully.

KENTUCKY.

ANSWERS.—1. That depends. If you have self-spacing frames, they ought to travel safely just as they are. If they are loose-hanging frames, they must be secured in some way so they will not shake around. One way is to thrust down at each end of the hive, between each two frames, a small stick with a small wire-nail driven in at one end, so that the stick shall not sink down into the hive. But no sort of packing is needed either over or under the frames.

2. Again, that depends. It depends upon what the "usual entrance" is, and what the temperature is. If your entrances are like mine,  $2 \times 12$  inches, no further ventilation will be needed unless it be quite warm, say something like 70 degrees. But if your entrances, like many entrances, are only  $\frac{3}{8}$ -inch deep, then you should give extra ventilation unless the temperature be less than 50 degrees, and even at that there might be some danger. The larger the entrance the less need for extra ventilation.

3. Not so easy to say. They will be very noisy, but they'll be noisy anyhow when being jolted over rough roads. When suffering for want of ventilation, they may become so heated that you will easily recognize the increased heat by holding your hand at the entrance or any other point where air may escape. But it is rather dangerous to let them be heated up to that degree. The safe way is to give them a good showering with water whenever you are at all suspicious they are too warm.

4. Not until about the time the most advanced colonies begin to start cells of their own accord. Or, to take it on another basis, not until bees are gathering enough so as to

begin building comb. You can begin a good deal sooner than either of those times, but your queens will not be worth rearing.

5. About 70 degrees. Instead of going by the thermometer, it may be better to say, don't handle bees any time when bees are not flying freely. But if you merely lift out a frame and quickly return it, as when you want to know in the spring whether brood is present, then it may be safe at 55 degrees or less.

6. For some years I have been of the opinion that for me there is no time when it is profitable to spread brood. Early in the season, at the time when we want bees to build up as fast as possible, the bees of their own accord have all the brood they can cover. In that case, if brood is spread it can result only in chilled brood, thus hindering instead of helping the building up. I don't know whether the bees of others are different or not. If at any time your bees are covering combs that have no brood or eggs at the outer part of the cluster, it ought then to be safe and profitable to spread. But be sure you're right before you go ahead.

7. Strengthen the weak colonies. Perhaps not all of them, but as many as you can make strong enough for the harvest.

8. I don't know. Perhaps in that case it may be as well to do neither, for generally with the beginning of harvest there is no further spreading of the brood-nest, and the supers will give all the extra room needed.

9. I don't know.

## Queens Produced by West's Cell Protectors and Cages—Difference in Weight of Honey Sections

1. Some one has said that queens developing from cells given to colonies by means of West's cell protector or queen cages do not do well. In 1912 I used this method considerably, and it seems to be the case as asserted. What is your opinion as to this? It looks a little to me as though such colonies fill up the brood-chamber well, but do nothing in the supers. In the two cases that I tried West's protector, the colonies reared their queen from those queen-cells. The colonies appeared so quiet as to suggest their dying off from queenlessness; but when looking the colonies over preparatory for wintering (outside), queens were found, and the brood-chamber well stocked with honey.

I made it quite a practice, in looking for surplus queen-cells, to put the best looking ones in the West protector and introducing the latter with cells. I have a little stand for keeping the cells in the protector in an upright position. I have gotten to be prejudiced against the "protectors."

2. It rather displeases me that my sections of honey (1912), while looking well, averaged in weight only 13 ounces, while about all the others I weighed in this neighborhood weighed at least 14 ounces, and sometimes more.

Are there any reasons evident for such discrepancy? In 1912 I had five times as much honey than in 1911. PENNSYLVANIA.

ANSWERS.—1. Some European authorities claim that the inmates of the cells receive a benefit from the close contact of the bodies of the bees, which benefit is lost when cells are in nurseries or cages. The Stanley nursery ought to be an exception, for in that the bees are allowed free access to the cells. One would naturally suppose that it would be more harm to a cell from long than from short confinement in a cage. Moreover I should expect that the young queen would be hurt as much by an hour's imprisonment immediately after being sealed as it would by a day's imprisonment immediately before emerging from its cell. Indeed, I suspect that the convenience of a nursery may overbalance all the harm of the confinement if a cell be not caged until within a day of the



# American Bee Journal

hatching of the virgin. At any rate, I have had some excellent queens after such confinement. But I should expect a poor queen from a cell caged immediately after being sealed.

2. You will probably find that in flush years, when honey comes in rapidly, combs will be filled out more plumply than in a

slow flow, perhaps because in a slow flow the bees have more time to build wax and seal combs. You will also find that they will fill combs more plumply if crowded for room. Like enough you gave the bees more surplus room than your neighbors did. Taking one year with another, you are probably the gainer by it.

in my office for 3000 pounds at 17 cents, but I can not fill it.

Not any kind of honey sells under 10 cents here. I produce bulk comb honey, or chunk honey as you please to call it.

I certainly do enjoy reading the different opinions of my brother bee-keepers on the kind of honey to produce for the most profit.

Galax, Va., Dec. 26, 1912.

G. F. JONES.

## REPORTS AND EXPERIENCES

### Good Results Last Year

I did very well last year. With 14 colonies I increased to 19, and took off 610 pounds of honey, leaving over a super on each hive, as I came near losing many by starvation last spring.

W. ULMER MOORE.

Lott, Tex., Feb. 9.

### Bitter Honey

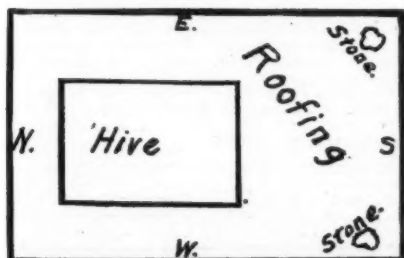
Some 6 or 8 years ago all of our honey was bitter. I noticed at the same time that there was honey-dew on the box-elder trees. By rubbing the leaves of the box-elder on my tongue I noticed the same bitter taste that was in the honey. I saw the bees sucking the leaves of the box-elder. I have not had any bitter honey since.

A. M. BROYLES.

Rhea Springs, Tenn., Jan. 10.

### Keep Weeds Down Around Hives

To keep weeds down in front of and around hives, I find nothing more satisfactory than common roofing felt ("rubber roofing," as it is sometimes called). Cut in 4-



foot lengths (or longer, if desired), place upon the ground, long way north and south, putting the hive in the center near the north end. It will keep the weeds down, make it easy to see the clipped queen at swarming time, keep the hives off the ground, and lasts for years. Try this where cinders are not easily obtained. Stones at the southwest and southeast corners will keep it from being blown up.

GEORGE F. WEBSTER.

Sioux Falls, S. Dak.

### Missouri a Leading Honey State

According to the last census report, Missouri has 40,110 persons keeping bees in the State, but as no statistics were taken in cities and towns, we should think the figures should be 45,000 at the least; the number of colonies were given as 203,500. The honey gathered in one year would probably be something over 6,000,000 pounds, valued at about \$800,000, and taking that with the value of the bees, it would amount to about \$1,500,000.

According to the report, there is about one in twenty farmers who keep bees. Missouri is ranked second in the number of colonies, but fourth in the amount of honey obtained. As some of the other States have large numbers of up-to-date bee-keepers, and as Missouri has so many farmers keeping bees that do not use modern methods, we think that our State makes a most remarkable record, and shows that it is adapted to bee-keeping. We have some extensive bee-keepers in the State, but the most of the bees are kept in small numbers

in a yard, throughout the State. Texas is rated as first in bee-keeping, but as Texas is about four times as large as Missouri, we think our State makes the best record comparatively.

By the way, we wish to speak of what is really a text-book on bee-keeping, sent to us from Texas by Louis H. Scholl. It surely fills the bill so far as we have had time to examine it, and the State of Texas is to be congratulated in having this fine work, and I am sure many of the other States would do well to follow Texas in her example. We have before us a bulletin issued by our own State in 1905, which doubtless has done much good for bee-keeping.

We now have a bill introduced into the House of our Legislature, asking for some changes in our foul brood law. We hope to get it into a law, as it is much needed in our State, and if we can get the law we hope to better cope with diseases of bees. The appropriation for this work in our State has been too small to pay for what is needed. If the amendment asked for is passed, we hope to have better and more up-to-date bee-keepers in our State than we now have.

Mexico, Mo.

J. W. ROUSE.

### Bees Wintering Well in Iowa

Bees are in fine condition here, and good prospect for white clover next season. I opened a hive today, packed on the summer stand, and found sealed brood 4 inches across, with a circle of eggs and larvae more than an inch wide around it. They have quite a quantity of sealed honey in the hive. I look for a strong colony in this hive when fruit blossoms come.

J. L. STRONG.

Clarinda, Iowa, Jan. 25.

### Managing Weak Colonies

Last spring I had some weak colonies. What was I to do with them? I got my Bee Journal and found out how to manage weak colonies. Last summer I obtained 1505 pounds from 37 colonies; in 1909 I obtained 3500 pounds. This year I sold my crop for 17 cents per pound. I have an order filed here

### Wintering—Producing the Crop—Tin Separators

I wintered 25 colonies, increased them to 37, and produced 400 pounds of Spanish-needle honey. The weakest colonies I winter in a concrete cellar under my dwelling house. The temperature is from 45 to 52 degrees. I never lost any in the cellar. The strong ones I winter out-of-doors, with shavings on top, and a telescope hood placed over them. Last winter was very cold, and below zero quite often. I lost one-third of those I had out-of-doors.

Before swarming I confine the queen under an excluder with one frame of brood, and the rest drawn-out combs. The rest of the brood in the upper story, and on this supers are used. I extract the honey in the fall at the end of the crop.

With a double brood-chamber I found after the harvest that the upper story had the most honey, and the lower story with the queen and brood had not stores enough to carry them through the winter. I have exchanged frames, but that is a mean job, for as a rule bees are generally cross when bothered after the harvest. I am thinking of exchanging stories after the young bees are all hatched. Can any experienced bee-keeper give light on this question?

I rear all of my queens. I fix up my supers with starters in the winter. I use tin separators the full height of the section-holders. They are more expensive than wooden ones, but in the long run they are the cheapest. To clean them, I put an old wash-boiler on the stove, throw them all in, and let them cook thoroughly, then let them remain until the water is cold. The wax comes to the top.

WM. SASS.

Concordia, Mo., Jan. 29.

### Knife and Journal Pleases

I am very well pleased with the bee-keepers' knife you sent me some time ago. It seems to me the American Bee Journal is getting better right along. I could not do without it.

In the last number of this Journal I mentioned a crop of 3200 pounds of honey from 52 colonies. A misprint caused me to say 200 pounds from my bees in 1912.

G. A. BARBISCH.

La Crescent, Minn., Feb. 11.

### Caucasian Bees All Right

The Caucasian bees are all right in my estimation. They are good, early brood-rearers. I had swarms May 8. They seal their



IRA WALTON AND A PORTION OF HIS CAUCASIAN APIARY.

# American Bee Journal

honey evenly and snow-white, and will work when other bees do nothing. But as to their gentleness I do not find them as gentle as some claim. I am satisfied they are a good all-around bee. IRA WALTON.  
Gotham, Wis., Jan. 8.

## Finding Bee-Trees

The front cover picture of this Journal shows part of the tree cut away, the swarm exposed to view, and me hunting for the queen. After removing 30 pounds of honey and three frames of brood which they had built in two months, I brushed the bees into the hive, used smoke on them while doing this.

The best way to find bee-trees is to follow up little streams or creeks in the woods during the dry season. If there are any bees around, you are sure to find their watering place. When you have found it, watch



B. F. SCHMIDT CUTTING A BEE-TREE. This swarm was followed from his yard in June, 1912, and recovered 2 months later.

where they go. If they fly low down they are not far, but when they go high up in a circle their home is quite a distance. Watch several bees to be sure you get the right line, and then look at every tree as you go, low and high, and you will soon find them.

Another way to locate bee-trees is to set a bait of thinned honey on a stump or rock, and near it burn some old combs to attract the bees. If there are any bees around they will find the bait in an hour, and you can watch the direction of their flight easily.

The month of October, or during a dry season, is the best time to hunt bees with bait, as at that time there are usually but few if any flowers for the bees to work on.

B. F. SCHMIDT.  
N. Buena Vista, Iowa, Oct. 12, 1912.

## Crop Below the Average

Our bees for the first time in 10 years did not come up to the average. I took some 3500 pounds from 20 colonies—all comb honey. The honey season closed about Aug. 25, and after that no more honey was gathered. All through September it snowed and rained.

J. D. KAUFMAN.  
Kalispell, Mont., Jan. 28.

## The Bee Journal a Great Help

The Bee Journal has been a great help to me, and I shall recommend it to all beekeepers. HENRY C. SCHUCHERT.  
Elgin, Ill.

## Apiary Destroyed by Fire

The day after Christmas a fire started some 3 miles from my old home in San Diego county. With an eastern gale it ran over three ranges of mountains, finding one of

my best apiaries, where it burned the honey house and 43 colonies of bees. It has badly injured or destroyed our bee-range. Under the circumstances we have sold some 500 colonies and partly gone out of the bee-business for a while until the sages, etc., grow again.

Everything was dry as tinder, for they had no rain until three or four days ago.

The greatest cold I have known since I left the East in 1875, has covered California and hit the oranges and lemons very hard, probably ruined half of the crop. Orange and lemon growers smudged every night for over a week. They took 75 to 100 carloads of oil out every day and made solid clouds of smoke, and yet lost.

MAJ. GEO. F. MERRIAM.  
Los Angeles, Calif.

## A Tall Bee-Tree

Is this the tallest bee-tree? T. F. Strain, of Tacoma, Wash., told me he cut a large tree in 1870, to clear the ground. He did not know it was a bee-tree. It was 350 feet high, and was 8 feet across the stump. After being sawed off, the tree stood for two weeks before it fell, as the wind had to blow before he expected it to fall. It fell late in the afternoon, and at supper time a bee was seen on the window, the first they had ever seen in that country.

L. W. BENSON.  
Galena, Kan.

## California Prospects

To date this has been the driest season known in southern California for many years. Since July 1 but 1.66 inches of rain has fallen, and dry winds have absorbed the moisture, so that our hills are as brown as in mid-summer. Last week a freeze destroyed millions of dollars worth of citrus fruits, young trees and vegetables. Prospects for the apiarist are not encouraging.

EUGENE BAKER.  
Los Angeles, Calif., Jan. 14.

## Advantages of Redwood Lumber

I am a builder by trade, and have used many thousand feet of redwood lumber, and my experience is that it is far superior to pine in a great many ways. Most of the material that is exposed to the weather in the buildings of wood in California is redwood, with the rough side exposed to the weather. While it may not look quite so nice to an easterner, it is all the go here.

# Classified Department

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind. Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

## BEEES AND QUEENS.

NUTMEG ITALIAN QUEENS, leather color. After June 1, \$1.00. A. W. Yates,  
Hartford, Conn.

GOLDEN QUEENS that produce 5 and 6 band bees. Untested, \$1.00; Tested, \$3.00. 1A9t Robert Inghram, Sycamore, Pa.

BEEES AND QUEENS from my New Jersey apiary. J. H. M. Cook,  
70 Cortland St., New York City.

IMPROVED golden-yellow Italian queens for 1913; beautiful, hustling, gentle workers. Send for price list. E. E. Lawrence,  
1A8t Doniphan, Mo.

PLACE YOUR ORDER NOW for early delivery. Untested Queens, one for \$1.00; 6 for \$5.40. Tested Queens, one for \$1.50; 6 for \$8.40. Write for prices of Nuclei and full colonies. W. J. Littlefield, Little Rock, Ark.

HOW ABOUT those beautiful untested three-band Italian queens for 1913? We have them and know how to rear them; 30 years' experience. We rear queens that make bees that gather us heavy crops of honey, and we will send you the same kind

First, the rough side does not attract the sun's rays near so much as does a surfaced board, which will help to keep the board from warping, and also help to keep a cool hive.

Second, paint will last more than twice as long, and will not peel, blister nor crack. Puente, Calif., Jan. 10. H. M. HESS.

## Good Crop in Illinois

The bees worked good, and there was considerable swarming the past year. My son started an apiary and had fine success for a beginner. Our best colony produced 214 pounds of extracted honey. The strong colonies produced five supers. Chicago, Ill., Jan. 19. TIM O'DONNELL.

## Fine Prospects in Vermont

Bees are having an open winter here. We have had but 2 inches of snow to date. I expect to see the bees winter the best they have in years. We are looking for a big yield. I never saw clover look better than it did last fall. My average was 40 pounds per colony, but I had to feed some in the fall. M. C. YOUNG.

Rutland, Vt., Jan. 30.

## Mild Winter in France

The year 1912 will count among the poorest for bee-culture in France, and especially in Brittany, where the winter losses were great, owing to short stores.

We are having a very mild winter. On Jan. 6 I saw bees bringing in pollen gathered on furze blossoms. The hazel is in bloom. I also saw yesterday some swelling buds of pear blossoms. ETIENNE GIRAUD.

Le Landreau, France, Jan. 15.

[The above locality is in Eastern France, near the River Loire, at the 47th degree of latitude.—EDITOR.]

## Bees in South Dakota

I was in southeastern South Dakota three weeks last September. They are getting lots of bees up there. It is going to make a good bee-country, lots of hearts-ease, white clover and alfalfa.

The bees here were in fine condition for winter, and they had a fine flight on Christmas day. I. N. ARNOLD.

Kalona, Iowa, Jan. 8.

at 75c each; \$4.25 for 6; \$8.00 per dozen. Safe arrival and satisfaction always guaranteed. Rialto Honey Co., Rialto, California.

ITALIAN QUEENS ONLY—Untested, \$1.00; sel. tested, \$1.50. Bees by pound and half-pound. Plans, "How to Introduce Queens," 15c; "How to Increase," 15c; or both 25c. Descriptive list free. 3A2t E. E. Mott, Glenwood, Mich.

GOLDEN QUEENS that produce Golden Workers of the brightest kind. I will challenge the world on my Golden and their honey-getting qualities. Price, \$1.00 each; Tested, \$2.00; Breeders, \$5.00 and \$10.00. 2A1f J. B. Brockwell, Barnettts, Va.

QUEENS—Improved red-clover Italians, bred for business; June 1 to Nov. 15. Untested queens, 75c; select, \$1.00; tested, \$1.25 each. Safe arrival and satisfaction guaranteed. 1A1y H. C. Clemons, Boyd, Ky.

GOLDEN and 3-band Italians, also gray Carniolan queens. Tested, \$1.00 each; 3 or more 90c each. Untested, 75c each; 3 to 6, 70c each; 6 or more, 65c each. Bees per lb., \$1.25; nuclei per frame, \$1.50. A discount on orders booked 30 days before shipment. 1A1f Bankston & Lyon, Buffalo, Leon Co., Tex.

QUIRIN's famous improved Italian queens, nuclei, colonies, and bees by the pound, ready in May. Our stock is northern-bred and hardy; five yards wintered on summer stands in 1908 and 1909 without a single loss. For prices, send for circular. Quirin-the-Queen-Breeder, Bellevue, Ohio.

GOLDEN and 3-band Italians, also gray Carniolan queens. Tested, \$1.00 each; 3 or more 90c each. Untested, 75c each; 3 to 6, 70c each;



# American Bee Journal

6 or more, 65c each. Bees per lb., \$1.25; nuclei per frame, \$1.50. A discount on orders booked 30 days before shipment. 3Atf  
C. B. Bankston, Buffalo, Leon Co., Tex.

**MOORE'S Strain and Golden Italian Queens.** Untested, \$1.00; six, \$5.00; twelve, \$9.00. Carniolan, Banat and Caucasian Queens, select, \$1.25; six, \$6.00; twelve, \$10.00. Tested, any kind, \$1.50; six, \$8.00. Choice breeders, \$3.00. Circular free. W. H. Rails, Orange, Calif.

ONE of our customers (J. A. Carnes, M. D., Mt. Carmel, Pa.) writes: "Your bees are evenly marked; all golden but the tip. They are the most GENTLE bees I ever handled." Untested queens, \$1.00 each. Send for wholesale prices. C. W. Phelps & Son, 3 Wilcox St., Binghamton, N. Y.

WE WILL require all our 2000 colonies this spring. We offer the one-year-old queens removed from these hives at 40 cents each, any quantity. Italian stock, delivered any time before June 1. Untested queens, this year's breeding, 60 cents each; delivery guaranteed. Book orders now. Spencer Apiaries Co., Nordhoff, Calif.

## HONEY AND BEESWAX

**WANTED**—Comb and extracted honey, and beeswax. Write us. Hildreth & Segelken, 265 Greenwich St. New York City.

**WANTED**—Comb, extracted honey, and beeswax. R. A. Burnett & Co., 6A12t 173 S. Water St., Chicago, Ill.

**RASPBERRY-CLOVER HONEY** in new 60-lb. cans at 9c. Sample, 5c. 3Atf  
J. D. Hull & Bro., Honesdale, Pa.

**WANTED**—Choice extracted white and amber honey in barrels or cans. Send sample and price delivered f. o. b. Preston. 8Atf M. V. Facey, Preston, Minn.

**FOR SALE**—Water White Alfalfa, Light Amber Alfalfa. Put up in any size packages, any quantity. Write for prices. 11Atf Dadant & Sons, Hamilton, Ill.

## FOR SALE

**FOR SALE**—50 to 300 colonies, 8-frame; good condition. E. F. Atwater, Meridian, Idaho.

**FOR SALE**—One hundred and twenty-five eight-frame hives, and five hundred supers with extracting frames, mostly unused, to be sold at a bargain. Philip Goode, 3A3t Lenexa, Kan.

**FOR SALE**—About one hundred black and hybrid Queens. Will ship any time after March 1st at 40 cts. each, or 12 or more 35 cts. each. D. E. Brothers, Attalla, Ala.

**FOR SALE**—An ideal bee location, consisting of house, barn, and 40 acres of land. For further particulars, write to 3Atf J. J. Zimmermann (Administrator), Alma, Wis.

**FOR SALE**—Empty second-hand 60-lb. cans—two cans to the case, good as new, 25 cents per case. C. H. W. Weber & Co., 2146 Central Ave., Cincinnati, Ohio.

**FOR SALE**—304 colonies of Italian-hybrid bees at \$1.00. Fine location for comb honey. Right of location to purchaser. Please don't write unless you mean business. 3Atf J. B. Marshall, Big Bend, La.

## POULTRY

**INDIAN Runner Ducks**, light fawns, also dark penciled, white eggsters, \$1.00 and up. R. O. Dickson, Box 61, La Harpe, Ill.

**FOR SALE**—Buff Orpington eggs, pure bloods: \$1.00 for 15. Satisfaction guaranteed. 2A1y W. H. Payne, Hamilton, Illinois.

**FOR SALE**—White-egg strain Indian Runner Ducks, White Orpingtons, White Wyandottes, Houdans, Bronze Turkeys, Ducks, \$1.25 each. A. F. Firestone, Broadwell, Athens Co., Ohio.

## MISCELLANEOUS

WE HAVE THE QUEENS READY NOW, and you can have them by sending us \$1.00 for one Untested; \$5.40 for 6; \$1.50 for one Tested; \$8.40 for 6. Write for prices of Nuclei and full colonies. W. J. Littlefield, Little Rock, Ark.

THE PRINCIPAL TROUBLE with honey-production is bad queens. We know you all wish to harvest large crops. The best of untested three-band queens, 75c each; \$4.25 for 6; \$8.00 per dozen. Safe arrival and the Golden Rule to all customers. We know how. No order too small or too large for our prompt attention. We can send them quick. The Golden Rule Bee Co., Riverside, Calif.

## SUPPLIES.

**FOR SALE**—Bees, Honey, and Bee-Keepers' Supplies. A. E. Burdick, Sunnyside, Wash.

**FOR SALE**—A full line of Bee-Keepers' Supplies. Agents' prices. Save freight. Dreamland Farms, Buckingham, Fla.

**BEE-SUPPLIES** for all Bee-Keepers in southern Idaho and East Oregon. Wholesale and retail. All we want is an opportunity to figure with you on Supplies. Write for Catalog. It will be ready by Jan. 1, 1913. It costs you a postal card only. C. E. Shriver, Boise, Idaho.

**BEE-SUPPLIES**—none better. 35 years of experience.

1 Ideal Winter-Case, complete.....	\$2.50
100 Hoffman Brood-Frames in flat....	2.50
500 No. 1 Sections.....	2.50
100 Section-Holders, scalloped.....	2.00
100 Section Slats, 1/4 inch.....	1.00
1 Champion Smoker.....	.70
DADANT'S FOUNDATION.	
Medium Brood, per pound.....	.50
Thin Surplus " ".....	.66
Extra Thin " ".....	.69

Discount on larger amounts.  
Satisfaction guaranteed or money refunded. R. H. Schmidt, R. R. No. 3, Box No. 209, Sheboygan, Wis.

## SITUATIONS.

**HELP WANTED**—Can take two or three young men, clean in mind and body, for the season of 1913. Board given, and more if we both do well. Address, R. F. Holtermann, 2A3t Brantford, Ont., Canada.

## WANTS AND EXCHANGES

**BEES WANTED**—Could take a Carload of Bees in spring; prefer Lanestroth hives, and Italian Bees, but open for others. Give particulars. Address, R. F. Holtermann, 2A3t Brantford, Ont., Canada.

**WANTED**—A good honey location with or without bees. Want to trade land for bees, residence and cash. D. E. Lhommedieu, Colo, Iowa.

## Eastern Bee-Keepers

Furnishing bee-supplies has been our business for 22 years. We are also honey-producers, operating several hundred colonies for honey. We have started many people who have made a success of the business. We still furnish them their supplies. They stick to us. You will if you get acquainted. We advocate only practice articles. Let us mail you our catalog on what you may need.

I. J. STRINGHAM.

105 Park Place, New York City

APIARIES: Glen Cove, L. I.

## WESTERN QUEENS

3-band long-tongued Italians

Prices for May delivery: Untested, 1, 00c. 6, \$4.80; 12, \$9.00. Tested, 1, \$1.35; 6, 6.50; 12, \$12.00. Satisfaction guaranteed or money back. "A trial will convince."

GLEN L. EVANS, Greenleaf, Idaho

**The Opfer Hive-Entrance Bee-Feeder.**—In the spring we must feed the bees to have them strong for clover-bloom. With all the present feeders this is a troublesome job—either the hive-bottom or covers have to be taken off every time we feed. With the Entrance Feeder shown herewith, all you have to do is to push it in at the hive-entrance and leave it there until there is no more need of feeding. It contracts the entrance, and that is what you want in spring. The size of this feeder is 7x8 inches, and 1/4 inch deep, and holds 5 ounces of feed. You can feed 100 colonies in about 25 minutes.

In case of foul brood you can feed medicated syrup, and your bees will build up strong and healthy, and be in good shape when clover starts, ready to shake on foundation.

I have used 75 of these feeders about 8 years, and today they are as good as ever. With proper care they will last a life-time.

In spring or in fall most bee-keepers neglect to stimulate brood-rearing—one of the most important things in having strong colonies and good wintering. It does not depend so much upon the amount of feed as it does upon regularity every night (unless the weather is too cold), and you will wonder where your strong colonies come from.

Some of the many good points of the Entrance Feeder are these:

1. It is made of heavy galvanized iron and will last a life-time.
2. It reduces the hive entrance.
3. It reaches where the bees can get at the feed even in cool weather.
4. It feeds the right amount.
5. It will not cause robbing.
6. It will not disturb the colony while feeding.
7. It permits quick work.
8. The bees will not drown in it.

I am in a position to furnish all demands for these feeders at the following prices, f. o. b. Chicago: One for 20c; 5 for 18c each; 10 for 16c each. If ordered by mail, add 10c each for packing and postage.

Address all orders to—A. H. OPFER, 6259 Patterson Ave., Chicago, Ill.

## ALSIKE CLOVER SEED.

Small red, Mammoth, timothy, alfalfa, sweet clover, (white or yellow) millet, rape, blue grass, etc., also seed corn, thoroughbred, four varieties. Catalog apary supplies free. Honey new in July and later.

F. A. SNELL,

Milledgeville, - - - Carroll County, Ill.

## Early (FROFALCON) Queens "ITALIANS"

Untested Queens to June 1st \$1.00 each. After June 1, 90c each. Special prices in large quantities. A 5-pound bucket of Orange Blossom Honey delivered at your door by express for \$1.10.

JOHN C. FROHLIGER,

1642 Milvia Street, Berkeley, Calif.

Greater San Francisco, Calif.

Falcon Bee-Supplies, etc.

## SUPERIORITY of the CARNIOLAN BEE

A paper explaining the merits of these bees, best management for comb and extracted honey, and other information FREE FOR THE ASKING.

Bee-keepers who buy Queens in dozen lots or more should get their orders booked early. The breeder can make shipments more nearly as desired.

ALBERT G. HANN,

Carniolan Queen Breeder.

PITTSBURGH, N. J.

## ITALIAN QUEENS!

\$1.00 EACH, \$9.00 PER DOZEN.

Queens are reared by as good a method as anybody can rear Queens. My stock is hearty and fine honey-gatherers. All queens shipped by return mail within 24 hours after I receive the order.

M. BATES, R. D. No. 4, Greenville, Ala.

# American Bee Journal

## BOOKS FOR BEE - KEEPERS

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**AMERICAN BEE JOURNAL,  
HAMILTON, ILLINOIS.**

**First Lessons in Bee-Keeping**, by Thos. G. Newman, revised by C. P. Dadant.—Intended mainly for beginners. Nearly 200 pages, and over 150 pictures. Bound in strong paper cover, showing bee-brood in all stages of development from the newly-laid egg. This book contains the foundation principles of bee-keeping, as its name indicates. Price, postpaid, 50 cts.; or free with the American Bee Journal one full year if paid strictly in advance—by either new or renewal subscription at \$1.00.

**Fifty Years Among the Bees**, by Dr. C. C. Miller.—340 pages, bound in cloth, and illustrated with 112 half-tone pictures taken by Dr. Miller himself. It is a good, live story of successful bee-keeping by a master of the subject, and shows with clearness just how Dr. Miller works with bees and produces tons of honey. Price, \$1.00, postpaid; or with the American Bee Journal a year, \$1.80; or given FREE as a premium for sending 3 New subscriptions at \$1.00 each.

**Scientific Queen-Rearing**, as Practically Applied, by G. M. Doolittle.—It tells how the very best Queen-Bees are reared in Nature's Way. A good authority says: "It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of the modern methods of rearing queens wholesale." Price, bound in cloth, 75 cts., postpaid; or with the American Bee Journal a year—both for \$1.50. The same book bound in leatherette, 50 cts., postpaid; or free with the American Bee Journal one full year if paid in advance strictly, by either new or renewal subscription at \$1.00.

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**Bee-Keeper's Guide**, or Manual of the Apiary, by Prof. A. J. Cook.—This book is very instructive, interesting, helpful, and thoroughly practical and scientific. It is perhaps the most complete of any bee-book on the Anatomy and Physiology of bees, and also the Botany of bee-keeping. Bound in cloth, 544 pages, 295 illustrations. Price, postpaid, \$1.20; or with the American Bee Journal a year—both for \$1.90; or given FREE as a premium for sending 3 New subscriptions at \$1.00 each.

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**Southern Bee Culture**, by J. J. Wilder, of Georgia, perhaps the most extensive bee-keeper in the State. It is a real hand-book of Southern bee-keeping. Bound in paper, 145 pages. Price, postpaid, 50 cts.; or with the American Bee Journal a year—both for \$1.30.

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**The Emerson Binder**.—It has a stiff board outside like a book-cover, with cloth back. Will hold easily 3 volumes (36 copies) of the American Bee Journal. Makes reference easy, and preserves copies from loss, dust, and mutilation. Price, postpaid, 75 cts.; or with the American Bee Journal a year—both for \$1.60; or given Free as a premium for sending 2 New subscriptions at \$1.00 each.

**A Modern Bee Farm**, by Samuel Simmins. The author is a live English bee-keeper. He has kept up with the progress in this line not only in his own country but all over the world. His views are determined, but very

well taken, and his points are made with an accuracy which is convincing. Cloth bound 470 pages. Price postpaid \$2.00 or with the American Bee Journal one year both for \$2.75.

**British Bee-Keepers' Guide**, by Thomas W. Cowan.—This is without doubt the standard work for the English bee-keeper. It is very much condensed, containing 170 pages, and is nicely illustrated and well bound. Price, postpaid, \$1.00; or with the American Bee Journal one year, \$1.75.

**Irish Bee Guide**, by J. G. Digges.—Any one who wishes to become acquainted with the manner and methods of bee-keeping in the old country, and in Ireland particularly, ought to read this book. Price, \$1.00, postpaid; or with the American Bee Journal for one year, \$1.75.

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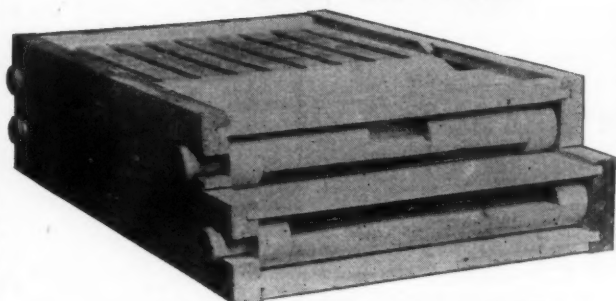
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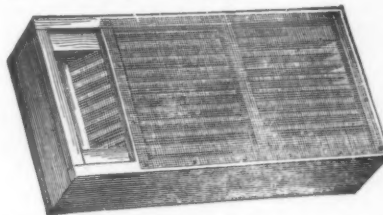
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# American Bee Journal

## HONEY AND BEESWAX

CHICAGO, Feb. 17.—Comb honey has sold freely during this month, and stocks have been reduced, and if this demand keeps up during the coming month we are of the opinion that the yield of 1912 will practically be all consumed before that of 1913 is in evidence. We think the excellent quality of honey has been the main factor in the large volume of sales, many retailers saying they have sold more honey this winter than they have for quite a long time, as people will come back for some more of the same kind they had before.

Extracted is moving off steadily and may clean up. Prices on comb has varied, and is lower by 10c per pound than it was in September and October, and it is too late in the season now to expect any advance in price unless the crop is actually about exhausted. Beeswax remains steady at from 30@32c per pound according to color and cleanliness. R. A. BURNETT & Co.

NEW YORK, Feb. 15.—The market is practically bare of comb honey of all grades, some few small odd lots are coming in yet, and find ready sale at 12@16c for white, and 11@13c per pound for dark and amber, according to quality and style of package. The market for extracted honey has been very quiet during the past two months, and we do not see any indications for a better demand, as the supply is more than ample to meet the demand. California light amber sage, which was reported to be of very short crop in the beginning of the season was held at high figures, and now it is being offered quite freely with no buyers. West India honey is arriving very freely with very little

demand, and prices are declining right along the line. We quote California sage, light amber, at 7½@8c per pound; California alfalfa at 6@6½c per pound, and West India at 73@75c per gallon.

HILDRETH & SEGELKEN.

LOS ANGELES, Feb. 15.—There is very little business in California honey at present, owing principally to the small stocks on the Coast. These are in the hands of holders who are not forcing sales, and the demand is correspondingly light. We quote the market as firm but quiet: Light amber sage, 6½@6¾c; water-white alfalfa, 7@7¼c. All f. o. b. Coast with \$1.00 freight rate by rail. Light amber sage, 6¾@6¾c; f. o. b. steamer at San Diego, with 60c rate to New York via Tehuantepec. HAMILTON & MENDERSON.

KANSAS CITY, MO., Feb. 14.—The supply of both comb and extracted honey is large. The demand fair. We look for a better movement from now on. We quote as follows: No. 1 white comb, 24 section cases, \$1.10 to \$1.25; No. 2, \$1.00. No. 1 amber, \$1.00; No. 2, \$2.50 to \$2.75. Extracted, white, per pound, 8@8½c; amber, 7@7¼c. Beeswax, per pound, 22@25c.

C. C. CLEMONS PRODUCE CO.

CINCINNATI, Feb. 20.—The market for honey has livened up considerably, and we are selling fancy double decker comb honey at \$3.75 to \$4.00 a case; fancy extracted honey in 60-lb. cans at 9@10c a pound, and amber extracted honey in barrels at from 6½@8c a pound, according to the quantity and quality purchased. For choice bright yellow

beeswax we are paying 30c a pound delivered here, or if taken out in trade we allow 32c. THE FRED W. MUTH CO.

BOSTON, Feb. 14.—Fancy white comb honey, 16@17 per lb.; No. 1, 15@16c. Fancy white extracted, 10@11c; light amber, 9@10c; amber, 8@9c. Beeswax, 30c. BLAKE-LEE CO.

INDIANAPOLIS, Feb. 14.—White comb sells at 18c in 10-case lots; No. 1 white, one cent less. Amber comb in slow demand, and at lower figures. Best extracted sells at 11@12c in 5-gallon cans. Comb honey seems to be in excessive demand, and very little is now being offered by producers. Beeswax is in good demand, and producers are being paid 30c per pound. WALTER S. POWDER.

DENVER, Feb. 15.—We quote comb honey in a jobbing way at the following figures: No. 1, \$3.05; choice, \$2.00; No. 2, \$2.70. Extracted honey, white, 9c; light amber, 8c; strained, 6¾@7c. We pay 26c in cash and 28c in trade for clean yellow beeswax delivered here.

THE COLO. HONEY-PRODUCERS ASS'N.  
F. RAUCHFUSS, Mgr.

CINCINNATI, Feb. 15.—The demand for comb and extracted honey is light, with a good supply. No. 1 white comb honey sells in large lots at \$3.60 per case of 24 sections. There is no demand for off grades. White extracted honey in 60-pound cans is selling from 9½@10c; light amber in barrels 7@7½c; in 60-pound cans, 8@8½c. Beeswax in fair demand sells at \$33 per hundred.

The above are our selling prices, not what we are paying. C. H. W. WEBER & Co.

SAN FRANCISCO, Feb. 14.—The demand for comb honey has not been so marked, although plenty has been offered, and the prices are as follows: Fancy No. 1, 15@16c; No. 2, 13½@14½c; dark comb, 11@12c; water-white extracted, 8@8½c; light amber, 7½@8c per pound; amber, 6@7½c; lower grades, 5@6c. Beeswax, 27@30c for nice yellow wax, and 23@26c for dark. JOHN C. FROHLIGER.

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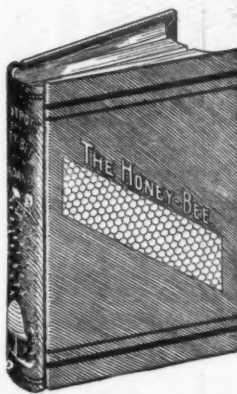
My Dear Mr. Dadant:—

After reading your book carefully I must say it is a splendid work and contains much information that the others leave out, as well as the practical things.

Very cordially,

Frank C. Pellett,

Atlantic, Iowa, Feb. 4, 1913.



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A carload of perfectly new goods is just on hand from the factory. This brings up our assortment so that we can now furnish almost anything listed in the catalog at once.

Hives should be ordered at once if they are to be ready for spring. Frames, and other inside fixtures too, should be put together now; and as this is a dull season with most of our customers, the work can be done now with no extra expense.

If you are wanting any special goods, orders ought to be in our hands within the next few days. Other cars will be coming from the factory, and we can save you considerable in transportation charges by having your goods come with ours in the cars.

Our new catalog will be out, probably, before the first of February. If you are not on our mailing list, send us a postal-card request for this catalog, and it will be mailed as soon as they come from the printers. In the mean time you may order from the 1912 catalog. If you haven't one on file, a copy will be mailed immediately on request.

If you want to buy in quantities considerably larger than quoted in the catalog give us a list of your needs and we will quote price accordingly.

If you have never tried Root quality goods, make a beginning this season. You will not be disappointed in results. Our branch is maintained for service in this line, and we can give it to your entire satisfaction.

## C. H. W. WEBER & CO.

2146 Central Avenue.

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OHIO.

DADANT'S FOUNDATION

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**One Hundred Tons of**  
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